

# Operator and Service Manual

## GE SENOGRAPHE ESSENTIAL 40' SELF PROPELLED MAMMOGRAPHY UNIT



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

**Call Oshkosh Specialty Vehicles at 800-839-0630 for questions regarding the Operation or Service of this unit.**

## List of Revisions & Warnings

### Revisions

00 New Release

June 2008

### Notice

In accordance with our policy of product development, and in compliance with the GEMS VCR program, Oshkosh 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 Oshkosh Specialty Vehicles for assistance.

This manual is one of two (2) information documents provided in the mobile unit. The documentation package consists of:

Volume I – Site Guide, Operators Manual, and associated drawings

Volume II – Vendor Information

These volumes should be kept in the mobile unit at all times.

Any problems or questions related to the components or systems covered in this manual may be directed to:

Oshkosh Specialty Vehicles  
16745 South Lathrop Avenue  
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(001) 800.839.0630 (24 hour service)


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<http://www.oshkoshsv.com/>


## 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.

 The term “IMPORTANT” is used whenever information exists that requires special attention to procedures to ensure proper operation of the equipment or to prevent its possible failure.


 The term “CAUTION” is used whenever potential damage to equipment exists, requiring correct procedures / practices for prevention.

 The term “WARNING” is used whenever potential personal injury or death situations exist, requiring correct procedures / practices for prevention.

 The term “DANGER” is used whenever immediate hazards exist that will result in personal injury or death that cannot be eliminated by design safeguards.



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.

 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.

**Oshkosh 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 Oshkosh SPECIALTY VEHICLE’S SPECIFICATIONS, WHICH ADVERSELY AFFECT PERFORMANCE OR DURABILITY (or) ALTERATIONS OR MODIFICATIONS NOT RECOMMENDED OR APPROVED IN WRITING BY Oshkosh 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 Oshkosh Specialty Vehicles right away at 1.800.839.0630.

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## Section 1: Introduction

### **WARNING**

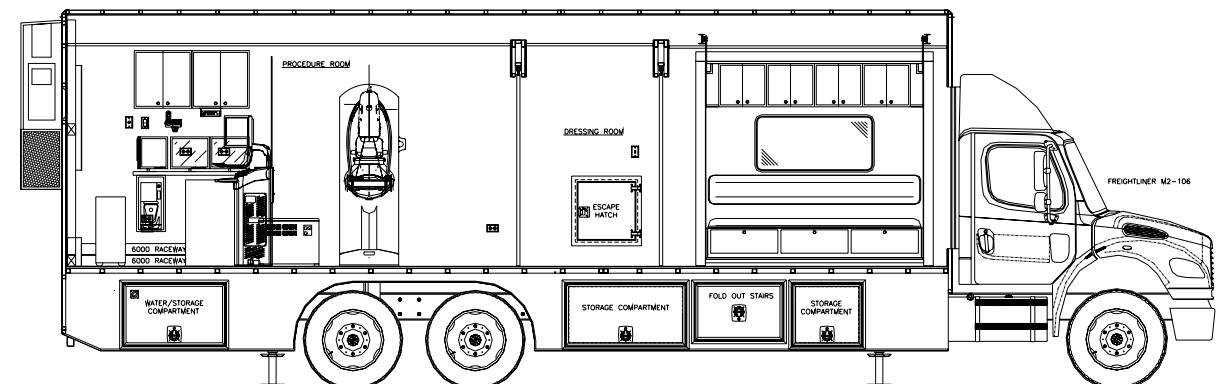
This manual is intended to instruct and assist personnel already qualified in the proper installation of the mobile self-propelled unit. This manual is not intended to enable persons unfamiliar with the mobile self-propelled unit to perform the set up and transport procedures.

### **IMPORTANT**

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

This manual contains the basic information needed to set up, transport, and service the mobile self-propelled unit.

This mobile self-propelled unit was designed to operate within certain limitations and specifications. When performing the set up 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 GE Senographe Essential Mammography System**



## **1.1 Mobile Self-propelled Unit Information**

### **A. Mobile Unit Dimensions**

The external dimensions of the mobile unit comply with the US Federal size limits for the Fifty States. The following dimensions do not include projections for clearance lights, door handles, radio antennas, etc.

- Overall Length – 40'-0" and 17" for the air conditioning unit}.
- Overall Width – 8'-6" (102").
- Overall Height – 13'-1" (157").

### **B. Mobile Unit Weight**

The overall weight is approximately 32,000 pounds (14,515kg). The rear axle weight will not exceed 31,000 pounds (14,061kg), and the front axle will not exceed 12,000 pounds (5,443kg). Customer options may increase the overall weight of the mobile unit.

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**Call Oshkosh Specialty Vehicles at 800-839-0630 for questions regarding the Operation or Service of this unit.**

## **Section 2: Safety Guidelines**



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.



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles.



Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled unit.

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.

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 in accordance with ANSI Standards.



Be certain to disconnect the power before working on any of the electrical systems. Failure to do so can result in injury or death.

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 safety systems that have been built into the mobile self-propelled unit to protect all personnel and equipment.

BEFORE attempting to service the mobile self-propelled unit, read this safety section as well as all other safety sections found in applicable manufacturers' manuals in the component literature binder.

If you need help or advise, please call Oshkosh Specialty Vehicles Customer Service at 1.800.839.0630 for assistance.

### **2.1 General 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. Read material safety data sheets where applicable.

Always keep tools clean and free of grease.

NEVER stand on chairs inside of the mobile self-propelled unit under any circumstances. ALWAYS use a ladder.

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

## 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 contactor disconnect switch be moved to the OFF position.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit.



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled unit.



Always inspect the power cable, connectors, and fasteners before usage. If you believe that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.



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.

When working with the electrical system for the mobile self-propelled unit, follow the warnings and cautions listed above.

## 2.3 Transportation Safety

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

- If any of the warning lights are illuminated, do not move the mobile self-propelled unit.
- Before moving the mobile self-propelled unit, make sure 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.

## Section 3: Mobile Self-propelled Unit Overview

The components of the mobile self-propelled unit have been divided into alphabetical order.

With each component a picture and description will be found to better show the components of the mobile self-propelled unit. Additional components of the mobile self-propelled unit can be found within the remaining chapters.

### 3.1 Gantry Room Overall

The Gantry Room houses the system components that support the medical system.

- Operator's Console
- Interior electrical panels
- Medical system
- Telephone
- Emergency stop button
- Cabinets for storage



**Figure 2: Gantry Room Overall**

### **3.2 Exterior Overall**

These pictures show the staff entry door, the emergency exit, and the HVAC unit.



Left Side



Right Side

**Figure 3: Exterior Overall**



### **3.3 Communications Connections**

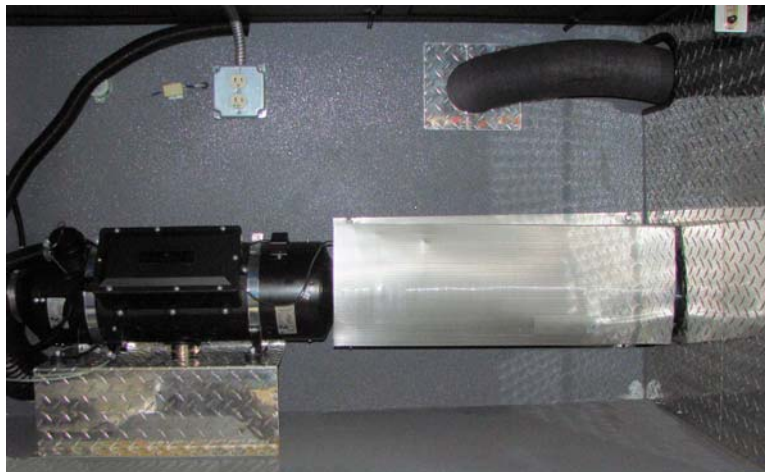
This photo shows the Fire Detection Output Panel, DC Fuse Panel, AC/DC Converter, Intrusion Alarm Panel, and Telephone & Data Connections. These are located in the left side center underbody compartment.



**Figure 4: Shore Communications Connections**

### **3.4 Diesel Heater**

The Diesel Heater is supplemental heater that is used to help warm up the unit during cold weather. The Control for the Diesel Heater is located in the Gantry Room right side wall.



**Figure 5: Diesel Heater**

### **3.5 Miscellaneous Rooms**



Patient Dressing Room



Waiting Room

**Figure 6: Miscellaneous Rooms**

### **3.6 Hubbell All Weather Phone Cables**

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



**Figure 7: Hubbell All Weather Phone Cables**

### 3.7 Levels, Digital

The Digital Levels for the unit are mounted on the Stabilizing Leg Control Panel. There are three types of adjustments that can be made. They are as follows;

Side-to-side adjustments for the rear of the mobile self-propelled unit can be made.

Side-to-side adjustments for the front of the mobile self-propelled unit can be made.

Front-to-rear adjustments can be made.

ALWAYS level the unit before use.



[Figure 8: Levels, Digital](#)

### 3.8 Levels, Spirit

The spirit levels provide an indication of the level status of the unit for set-up. The Levels for the unit are located as follows.

- The front left corner of the unit.
- The left front side of the unit.
- The rear left of the unit.



[Figure 9: Levels, Spirit](#)

### 3.9 Mobile self-propelled Unit Controls

Located inside of the mobile self-propelled 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.



Control for outside lights to the Staff entry door.

Lighting and Slide-out Controls and Intrusion Alarm Panel



Environment Controls

**Figure 10 Mobile Self-propelled Unit Controls**

**A. Interior Controls**

Temperature controls for the mobile self-propelled unit.

- Exterior Light Switch: ON / OFF light switch for the exterior lights.
- Light Switches: ON / OFF light switch for interior lights.
- Humidifier Water Indicator (optional): Indicator light for the humidifier water tank. This light will illuminate when the water tank is empty.
- Light Switches: ON / OFF light switch for interior lights.
- E Stop: Emergency stop button for the medical system.
- Humidistat: Humidity control for the mobile self-propelled unit.
- Diesel Heater Control Set 0 for OFF, Set 4 for High, Set Blue tab for Fan Only.

**NOTE: Do not use Fan Only without the generator running or external power connected as this can run down the batteries.**

**3.10 Phone & Data Line Connections**

The phone and data connections are located in the left side underbody compartment. The connections are used to connect the mobile self-propelled unit to the shore facility.

The telephone connections utilize a Hubbell all-weather connection.

The data lines utilize an RJ-45 connection and CAT-5E cabling.

The Hubbell all-weather phone connections are to be used with the provided Hubbell all-weather telephone cable.

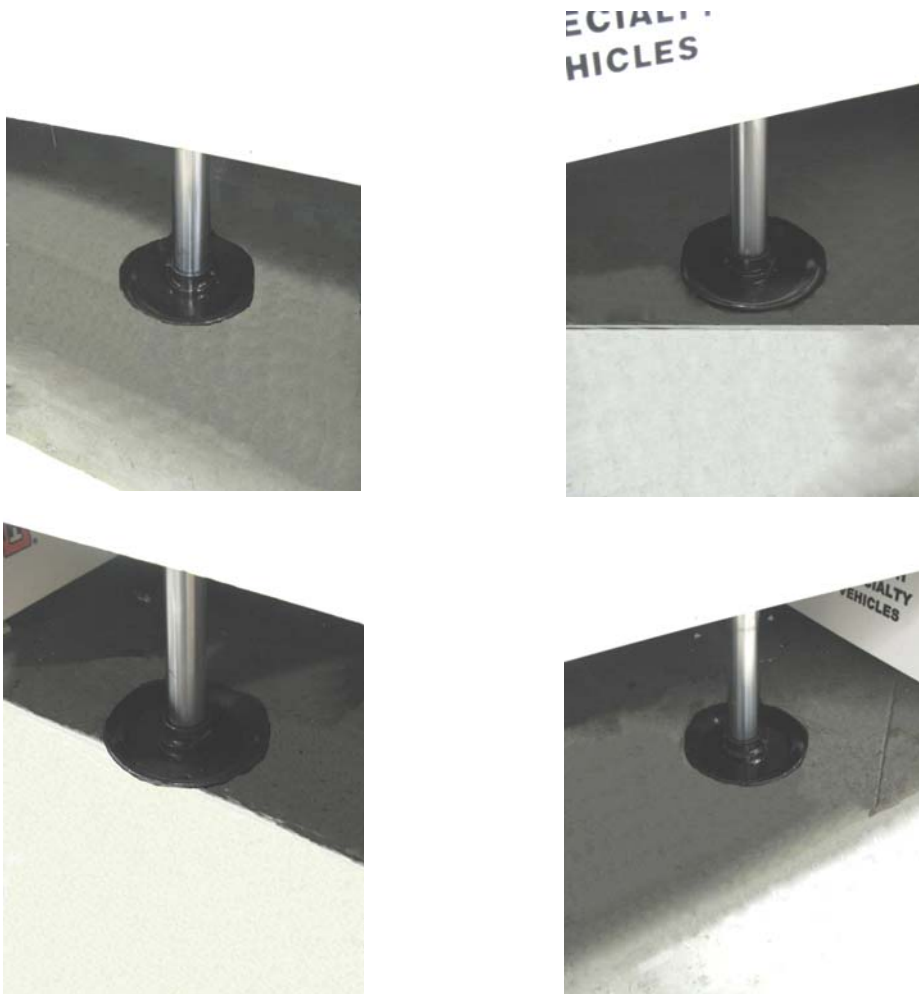
The data connections that are utilized are RJ-45's. The connections utilize CAT-5E cable and can be connected directly to the facility



**Figure 11: Phone & Data Line Connections**

### **3.11 Stabilizing Legs**

The stabilizing legs are extended underneath the front and rear of the mobile self-propelled unit when the medical system is in use. These legs are located on both sides of the unit behind the rear wheels and behind the cab. They are used to level the mobile self-propelled unit and decrease vibration caused by the medical system.



**Figure 12: Stabilizing Legs**

### **3.12 Stair Assembly**

The stairs allow access to the interior of the mobile self-propelled unit through the staff door.

Stair Assembly & handrails are stowed at the rear of Mobile unit. See. [Figure 13: Stair Assembly](#) below.

#### **A. Stair Assembly Set-up**

1. Unlock and open the Stair Compartment Door under the main Entry Door.



[Stair Assembly Compartment](#)

2. Pull the compartment door handle and rotate the stair assembly toward you until it is fully open.



[Lower Step in Stowed Position](#)

3. Rotate the lower step down into position.



Fold-out Stair Deployed  
[Figure 13: Stair Assembly](#)

**B. Stair Assembly Take-down**

Follow the reverse order of the set up procedure to store the stair assembly.



### **3.13 Wheelchair Lift Set up Procedure**

The wheelchair lift access door is located at the right front of the self propelled unit. The wheelchair lift cannot be accessed from the outside of the unit. See [Figure 15: Wheelchair Lift Controls](#) below for operating procedures.

1. Open the wheelchair access entry door and latch it in the full open position.



**Figure 14: Wheelchair Lift Assembly**



Main Power Switch



Remote Control Pendant

**Figure 15: Wheelchair Lift Controls**

2. Turn the main power switch ON.
3. Use the Remote Control Pendant to operate the lift.
4. Press the DEPLOY button to unfold the lift into position.
5. Press the DOWN button to lower the lift to the ground.
6. When the wheelchair patient is securely on the lift platform, press the UP button to raise the lift to floor height to allow the patient into the unit.
7. To stow the lift, press the STOW button to fold the lift into the unit.
8. Close the lift access entry door.



**Figure 15: Continued**

### **3.14 Water Connection**

The fresh water connection is located on the right side rear underbody compartment door of the mobile unit.



**Figure 16: Fresh Water Connection**

## Section 4: Safety Systems

This safety section contains important information about the safety systems that have been built into the mobile self-propelled unit to protect all personnel and equipment.

Before attempting to service the mobile self-propelled unit, read this safety section as well as all other safety sections found in applicable manufacturers' manuals in the component literature binder.

If you need help or advise, please call Oshkosh Specialty Vehicles Customer Service at 1.800.839.0630 for assistance.

### 4.1 Emergency Lighting

If the main AC power fails, four (4) dual beam emergency lights automatically illuminate. They are located in the Waiting Room, each of the two Dressing Rooms, and the Gantry Room

The emergency lighting system is wired into a 120V AC electrical system that allows them to keep their batteries at 100% charge.

The emergency lights will last for approximately 90 minutes. See [Figure 42: Emergency Lighting](#).

### 4.2 Fire Suppression (manual)

Three fire extinguishers are supplied with the mobile self-propelled unit. Instructions for operation are clearly printed on the canister of the fire extinguisher.



The Waiting Room



Gantry Room

[Figure 17: Fire Extinguisher](#)

The Fire extinguishers meet the following standards.

- A class A/B/C 1211 hand held unit.
- A charged weight of 2 lbs., 8 oz. (1.13kg).
- U.L. listed.
- Meets D.O.T. requirements.
- In accordance with N.F.P.A. Standard No. 10 "Portable Fire Extinguisher".

### **4.3 Fire Detection System (optional)**

The fire alarm control panel monitors and controls the fire alarm system. Located on the interior of the fire control panel is a brief list of instructions that explain how to use system control buttons to test, reset, and silence the alarm.

Please refer to the product manual located in Volume II of the literature provided by Oshkosh Specialty Vehicles.

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, a horn will sound and a strobe light will flash.
- The smoke detector detects heat and smoke.



**Figure 18: Smoke Detector**



**Figure 19: Fire Alarm Control Panel**

- Reset Button: The reset button resets the system after it has been activated
- Trouble Silence Button: The trouble silence button silences the horn that is activated after the alarm has been tripped.
- Disable Button: The disable button shuts the alarm system down for maintenance.

### **A. System Operation**

During normal operation, the control unit remains in a supervisory mode. If one smoke detector goes into alarm, it triggers the following actions.

1. The fire horn will sound continuously.
2. A (RED) alarm LED located on the front cover of the fire system control panel will illuminate.
3. The strobe light will flash.
4. The HVAC units will shut down.

#### **Pull Station**

A pull station is located next to the staff door in the Control Room. When the pull station has been pulled, the steps outlined above will occur.



**Figure 20: Fire Alarm Pull Station**

### **B. Power Backup System**

Primary 120V AC power to the fire system control panel is supplied from the 480V AC service panel. When the primary power is lost, on-line emergency batteries built into the system will provide 24 hours of supervisory power.

1. When primary power is lost, both the green "POWER" LED and the yellow "TROUBLE" LED will flash.
2. The "SYSTEM TROUBLE" and "POWER TROUBLE" LED's will also begin to illuminate.
3. The audible alert located inside of the system control panel will begin to BEEP.
4. The emergency batteries are rechargeable gel celled. They are also float charged to provide quick recovery after primary power is restored.

## **4.4 Marker Lights**

Extra L.E.D. type marker and side turn signal lights are installed on the unit body to assist the driver with maneuvering the mobile self-propelled unit.

## **4.5 System Shutdowns**

There are different types of shutdowns that can take place on the mobile self-propelled unit. Of the different types, both manual and automatic shutdowns exist. All shutdowns refer only to the medical system and not the HVAC system unless otherwise noted.

### **A. Manual Shutdown (Emergency Stop)**

Manual Stops are those that require the operating personnel to depress “Emergency Stop” buttons in the event of an emergency. The “Emergency Stop” buttons are located as indicated in [Figure 21: Manual Emergency Stop Button](#) below, aboard the mobile self-propelled unit. When this button is depressed, only the medical system will be shutdown. The HVAC system will still be operational.



This Emergency stop button is located in the Gantry Room left side

**Figure 21: Manual Emergency Stop Button**

### **B. Fire Detection System (standard)**

When smoke is detected, the fire detection control panel will trigger the following events.

1. The fire horn will sound continuously.
2. The strobe light will flash.
3. The HVAC units will shutdown.

## **4.6 X Ray Precautions**

An X Ray Indicator Light is provided above the staff entry door into the mobile self-propelled unit to notify all incoming personnel that medical procedures are in progress. An additional light is located above the Gantry Room door.



## **4.7 Warning Lights**

Warning lights have been provided to keep the operator and technician aware of the status of the mobile unit at all times. A description of each of the warning lights and their location is below.

If any of the warning lights are illuminated, please refer to [Appendix B: Troubleshooting](#), for additional information.

### **A. Power Warning Light**

The Power Warning Light is located on the exterior left side of the mobile unit. It illuminates when the mobile unit is receiving power. The mobile unit must have power at all times.

### **B. Power Loss Strobe Light**

When the mobile unit is not receiving power from shore power or from the onboard generator, the power loss strobe will flash notifying the operator to take action.

### **C. Transport Warning Light**



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 can occur to the mobile unit.

The Transport Warning Light is located on the exterior left side of the mobile unit. It illuminates when the Platform Lift is not in the proper transport position.

Please Refer to [Section 13: Lighting System](#) or to [Appendix B: Troubleshooting](#), for additional information in regards to these systems.



## **Section 5: Mobile Self-propelled Unit Set up Procedure**



The medical system requires the HVAC system to be supplied power at all times.

Generator power is used while the mobile self-propelled unit is being transported, and shore power can be used while the mobile self-propelled unit is in the parked position.



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

### **5.1 Park the Mobile self-propelled Unit**

In order to join the mobile self-propelled unit to the facility to make the electrical shore power connection, place the unit on the pad per the site-planning guide.

### **5.2 Lower the Stabilizing Legs**

After the mobile self-propelled unit has been parked on the pad per the site-planning guide, the stabilizing legs must be lowered to stabilize the mobile self-propelled unit before it can be used. Refer to [Figure 40: Stabilizing Leg Assembly](#) for the following procedure.

1. Move and hold the pump switch in the Pump ON position.
2. Pull the levers towards you to extend the landing legs to their extended position.
3. Extend the legs until the sand shoe is solidly on the support pad.
4. Release the pump switch. The switch should automatically retract to the Pump OFF position.

### **5.3 Re-level the Mobile Unit**

1. After the preceding steps have been completed, the mobile unit may no longer be level.
2. Re-level the unit if necessary using the digital levels that have been provided. Refer to [Figure 8: Levels, Digital](#) and [Figure 9: Levels, Spirit](#) if needed.

### **5.4 Set up the Stair Assembly**

The stairs can be set up with one person. The instructions are covered below. Refer to [Figure 13: Stair Assembly](#) for procedures.

1. Open the compartment door and pull to rotate the stair assembly down into position.
2. Fold the lower section of the stair assembly out for use.

## 5.5 Connect to Shore Power



Before connecting or disconnecting from shore power, make sure that the shore power contactor disconnect switch is in the OFF position.

Failure to do this can result in injury or death to the operator.



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled unit.



Always inspect the power cable, connectors, and fasteners before usage. If you believe that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.



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.

See paragraph [7.3](#) [Power Cable](#) Specific power cable instructions.

1. Make sure that the shore power disconnect is in the OFF position.
2. Open the underbody compartment door and remove the power cable from the underbody compartment of the mobile self-propelled unit.
3. Insert the Oshkosh Specialty Vehicles supplied connector into the shore power receptacle.
4. Move the shore power disconnect to the ON position.
5. Close the underbody compartment door; making sure that the access flap for the power cable has been released.

**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 22: Automatic Transfer Switch \(ATS\)](#)**

## **5.6 Connect the Phone and Data Lines**

The phone and data lines are in the underbody storage compartments. Both the phone and data lines can now be connected from the outlets (located in the underbody compartment) to the receptacles (located at the shore facility).

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](#).

## **5.7 Connect the Humidifier Water Hose**

On the exterior right side rear lower compartment door of the mobile self-propelled unit the connection to the Humidifier water storage tank needs to be made. Refer to [Figure 33: Fresh Water Connection](#) for location.

1. Remove the cap that covers the connection.
2. Attach the supplied water hose to this connection.
3. Attach the other end of the hose to facility provided faucet.
4. Turn on the water at the faucet.
5. This will fill the Humidifier water tank for the mobile self-propelled unit.
6. In the event that the water tank is overfilled, an overflow drain has been provided that exits outside of the mobile self-propelled unit.

## **5.8 Remove Restraining Hardware**

Various items may be secured while the unit is being transported.

- These items consist of chairs, monitors, doors, cabinets, cameras, and printers.
- Remove all restraining equipment before using the medical system.

## **5.9 Prepare the Medical System per OEM Instructions**

The medical system can now be prepared for use. Follow the OEM instructions posted on the wall of the gantry room in order to prepare the system.

## **5.10 Extend the Slide-out**

1. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-out.
2. Remove the restraining hardware that is being used to hold the slide-outs in the transport position.
3. Press and hold the control switch to the Roadside Wall Open position to extend the slide-out.
4. Release the switch when the slide-out is extended.
5. Verify that the slide-out is in the extended position.



## **Section 6: Mobile Self-propelled Unit Transport Procedure**



The medical system and the HVAC system must be supplied power at all times.

Generator power is used while the mobile self-propelled unit is being transported, and shore power can be used while the mobile self-propelled unit is in the parked position.



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.



Before transporting the mobile self-propelled unit, check to make sure all warning lights as well as all exterior marker lights are working correctly.



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

### **6.1 Secure the Medical System per OEM Instructions**

The medical system must be secured before transporting the mobile self-propelled unit. Follow the OEM instructions posted on the wall of the gantry room in order to secure the medical system before transport of the mobile self-propelled unit.

### **6.2 Secure all Equipment**

Various items must be secured before transporting the mobile self-propelled unit. Such items consist of chairs, monitors, doors, cabinets, cameras, and printers. Use the supplied restraining hardware to secure these items before transporting the mobile self-propelled unit.

### **6.3 Retract the Slide-out**

1. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-out.
2. Press and hold the control switch to the Roadside Wall Close position to retract the slide-out.
3. Release the switch when the slide-out is retracted.
4. Verify that the slide-out is in the retracted position.
5. Secure the slide-out with the restraining hardware provided.

## **6.4 Remove the Shore Power Connection**



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



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

1. Move the shore power disconnect lever to the “OFF” position.
2. Remove the power cable from the shore receptacle and store in the underbody storage compartments.
3. 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.

## **6.5 Store the Stair Assembly**

Before removing the stair assembly, check the interior of the unit one last time to make sure that all equipment is secure and ready for transport. Refer to [Figure 13: Stair Assembly](#) for procedures.

1. Close and lock the doors with the key that is provided.
2. Rotate the lower step into the stowed position.
3. Lift and rotate the stair assembly and door up into the stowed position.
4. Lock the stair compartment door.

## **6.6 Disconnect the Humidifier Water Hose**

The humidifier fresh water connection is located on the right side exterior near the rear of the mobile self-propelled unit. Be sure to fill the fresh humidifier water tank before disconnecting the fresh water supply.

1. Make sure that the humidifier water tank is full.
2. Turn off the water supply at the facility faucet.
3. Disconnect the hose from the faucet.
4. Remove the hose from the connection on the mobile self-propelled unit.
5. Using the cap provided, cover the connection on the mobile self-propelled unit.
6. Coil the hose and store in the underbody compartment.

## **6.7 Disconnect Phone and Data Lines**

Please refer to [Figure 11: Phone & Data Line Connections](#), for the following procedure.

1. Disconnect any phone and data lines that are currently attached to the shore receptacles.
2. Open the underbody compartment door and disconnect any phone and data lines that are connected inside the underbody storage compartment.
3. Coil and store the phone and data lines in the underbody storage compartment and close the underbody compartment door.



## **6.8 Raise the Stabilizing Legs**

After the stairs have been disassembled and stored, the stabilizing legs can be raised. Refer to [Figure 40: Stabilizing Leg Assembly](#) for the following procedure.

1. Move and hold the pump switch in the ON position.
2. Push the levers away from you to retract the legs.
3. Retract the legs to their transport positions.
4. Release the pump switch. The pump switch should automatically retract to the Pump OFF position.

## **6.9 Make sure that the Mobile Self-propelled Unit is Ready for Transport**

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

1. 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 before transporting the mobile self-propelled unit.
2. Close and lock all exterior doors.
3. Are all running & marker lights working correctly? If not, replace any LED lights that is not working before transporting the mobile self-propelled unit.
4. Are any warning lights illuminated? If so, check to find the cause of the warning. Do not move the mobile self-propelled unit if any warning lights are flashing. Please refer to the OEM supplied literature, the list of local service representatives, or contact Oshkosh Specialty Vehicles for service. The OEM supplied literature and the list of local service representatives can be found in the product information binders that have been included with the mobile self-propelled unit.
5. Check the fuel gauge and fill the fuel tank if necessary. Tank should be full.
6. Is the generator running? If not, please refer to [Appendix B: Troubleshooting](#) for assistance.





## Section 7: Electrical System



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, make sure that the shore power contactor disconnect switch be moved to the OFF position.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit.



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled 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.

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 self-propelled unit with thin wall conduit and/or wire-mold sized to accept the required service entrance conductors used throughout the mobile self-propelled unit.

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

## **7.1 120/240V AC Electrical Panels**

There are two panels used in the electrical system.

One 240V AC electrical panel Automatic Transfer Switch (ATS) that is located in the underbody compartment of the mobile self-propelled unit. This panel controls the distribution of power all incoming power to components aboard the mobile self-propelled unit.



**Figure 23: 240V AC Electrical Panel Automatic Transfer Switch**

One 120/240V AC electrical panel that is located in the Gantry Room of the mobile self-propelled unit. This panel is used to control the distribution of all 120/240V AC Power to components aboard the unit.



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.



[Figure 24: 120/240V AC Electrical Panel](#)

## 7.2 Facility Power Connection



**Figure 25: Shore Power Connection**

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

- Oshkosh Specialty Vehicles Connector: The plug that is provided by Oshkosh Specialty Vehicles for connection to the shore power receptacle.
- Power Cable: The cable that runs between the shore power connections and the 120/240V AC Automatic Transfer Switch.
- 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.
- Shore Power Receptacle Outlet: The receptacle outlet that the shore facility has installed for use with the Oshkosh Specialty Vehicles connector and power cable.
- Shore Power Unit: The complete shore power assembly.

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

Receptacle	
Manufacturer:	RUSSELLSTOLL
Model:	#DF2307FRAB0 120/240V AC Single Phase
Ampere Rating:	200 A

### 7.3 Power Cable

Descriptions:	Specifications
Service Amps:	150 A
4 Wire:	2 pole plus neutral and ground
Cable:	150 A, a 2AWG 4 Conductor Type W Super Vu-Tron, 600V – 2000V, 90° C, 45'-0" (13.71m) long
Plug	Russellstoll DS2307MP000/DF2026

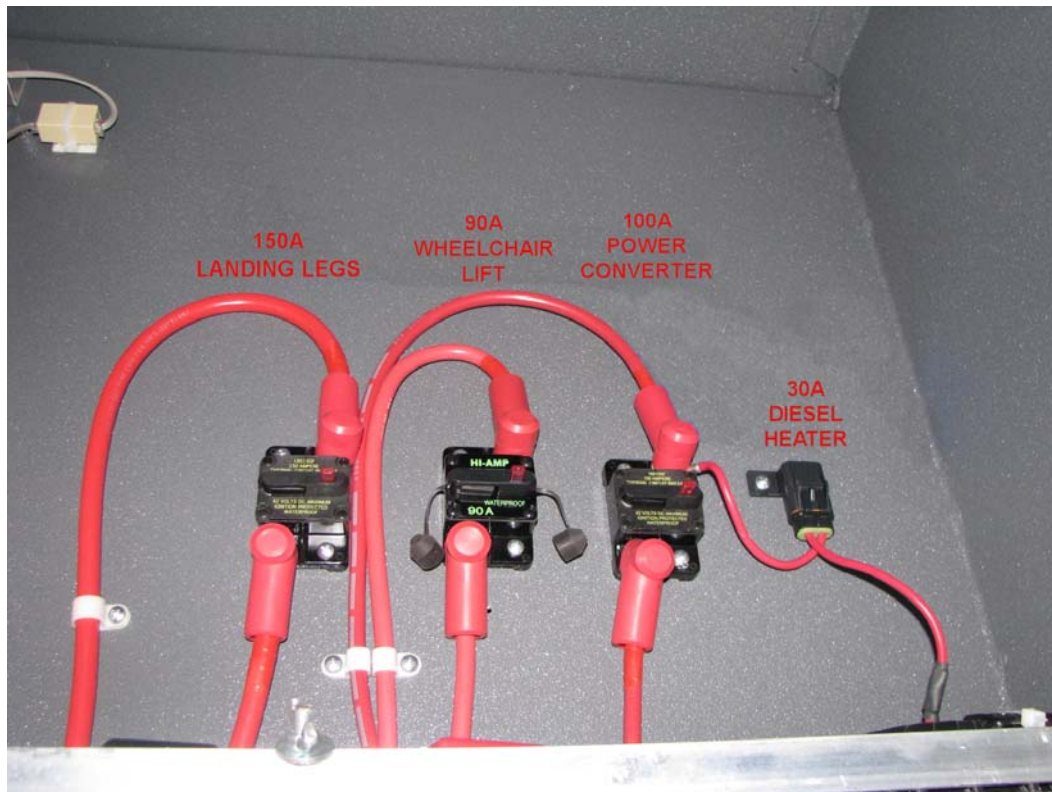
The primary power cable has the Russellstoll DS2307MP000/DF2026 plug on the end. This is a 120/240V AC single-phase cable. It is located in the left rear underbody compartment with the Automatic Transfer Switch (ATS). If shore power is available that supports this cable, it should be used. See [Figure 22: Automatic Transfer Switch](#) for connection.



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.

### 7.4 DC Power Circuit Breakers

The DC Power Circuit Breakers for the Landing legs, Wheelchair Lift, Power Converter, and Diesel Heater are located above the batteries on the forward wall of the lower compartment.



[Figure 26: DC Power Circuit Breakers](#)





## Section 8: Generator



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.



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.

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 in accordance with ANSI Standards.



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



Before connecting or disconnecting from shore power, make sure that the shore power contactor disconnect switch is moved to the OFF position.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit.



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled unit.



Always inspect the power cable, connectors, and fasteners before usage. If you believe that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.



The medical system and the HVAC system must be supplied power at all times. Generator power is used while the mobile self-propelled unit is being transported, and shore power can be used while the mobile self-propelled unit is in the parked position.



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.



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

The mobile self-propelled unit is equipped with a generator that is mounted in the underbody compartment, on the left side, aft of the cab. The generator supplies power to the unit during transport.

The generator will 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 be 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.

Once every six months, replace the 9V battery in the generator control panel. This is required to ensure that the generator starts in the event that the ATS transfers power to the generator.

**For additional information, refer to the Oshkosh Specialty Vehicles Component Literature binder for the product manual.**



**Figure 27: Generator**

- |                       |   |
|-----------------------|---|
| 120V AC Power Outlet: | An additional outlet has been provided for the operator of the mobile self-propelled unit to be used if needed. |
| Air Filter:           | The air filter is used to remove contaminants from the generators air supply.                                   |
| Battery:              | The battery is used to start the generator.   |
| Fuel Filter:          | The fuel filter is used to remove 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 used to remove contaminants form the oil supply.  |

## **8.1 Generator Stop / Start Selector**

This switch is located in the underbody compartment of the mobile unit on the 240V AC electrical panel, and is labeled “Generator START/STOP”. To start the generator, the switch must be in the START position and the generator unit will start automatically when the ATS senses a fault in the shore power.

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 control panel located in the underbody compartment is used to monitor and test the system.



**Figure 28: Automatic Transfer Switch (ATS)**

The generator remote stat switch is located in the Gantry Room on the left side wall at the operator's station.



**Figure 29: Generator Remote Start / Stop Switch**

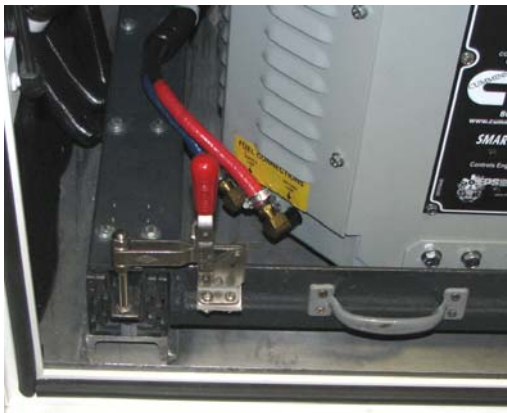
## **8.2 Generator Service Access**

To access the generator for service, the generator drawer release tabs on the right and left sides must be held down while pulling the generator out of the lower compartment. To assist with this, two clamps are installed that will hold the tabs in the disengaged position.

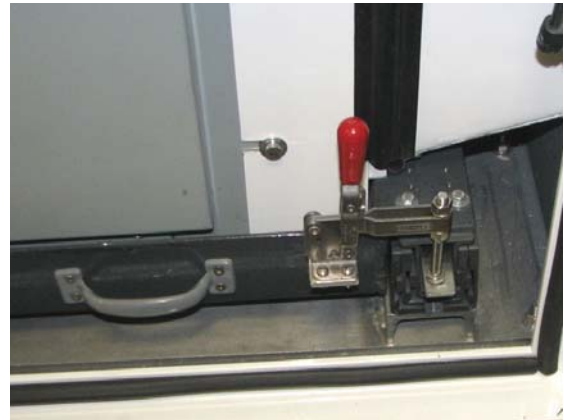
When sliding the generator back in place after service the release tabs must be unlatched so that the generator will lock in place for transport.

Refer to the photos in [Figure 30: Generator Drawer Release Tabs & Clamps](#) below.

The generator must also be pulled out for service the air intake filter located below the generator. See [Figure 31: Generator Air Filter Access](#) for reference.



Left Release Latched



Right Release Latched



Left Release Unlatched



Right Release Unlatched

**Figure 30: Generator Drawer Release Tabs & Clamps**

The generator air filter is shown below. It is held in place with two small clamps at each side. The filter should be removed and cleaned upon arrival at a new site before operating the generator. It can be cleaned by flushing with water or compressed air. Do NOT use a power washer to clean the filter.



Unlatched the clamps to remove the filter for cleaning. Latch the clamps after reinstalling the filter.

**Figure 31: Generator Air Filter Access**

## Section 9: Humidity System



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



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

The humidifier is responsible for maintaining the humidity levels within the mobile self-propelled 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 for fresh water:	The facility must provide a fresh water supply for use with the mobile self-propelled unit. The incoming supply is then attached to the connection.
Water Tank:	The water tank can be found in the equipment room at the rear of the gantry room. The tank is used for fresh water supply to the humidifier.
Humidifier:	The humidifier provides the required humidity to the mobile self-propelled unit per the medical manufacturers' requirements.
Humidity Controller:	The humidistat is responsible for the internal humidity of the mobile self-propelled 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 self-propelled unit.

### 9.1 System Operation

The humidifier system is capable of producing up to 12 pounds of steam per hour, at 15 amps. A sensor continually monitors the interior of the mobile self-propelled 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, the A/C unit is supplied with humidified air for distribution throughout the interior of the mobile self-propelled 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. If problems occur with the humidifier system, please refer to [Appendix B: Troubleshooting](#) of this manual.

During normal operation with the supply hose connected to the facility and supplying fresh water, Ball Valve "A" is closed. As demand for water at the humidifier tank is required, an internal water level sensor electrically controls Valve "F" (Fill Valve). As the water level in the tank decreases, Valve "F" opens allowing the tank to fill. As it reaches the full limit, the sensor electrically closes Valve "F" stopping the flow to the humidifier tank.

While pumping water from the Fresh Water supply tank, Ball Valve “A” is closed. The water pump is a “Pressure on demand” pump. As a demand is made for water by opening Valve “F” at the humidifier tank, the pump is energized and will supply water as needed. When the demand is satisfied, the pump senses backpressure in the water lines and it is de-energized.

The accumulator at the output side of the pump helps to reduce pressure spikes and keep the lines charged.

The water level sensor in the Fresh Water tank protects the pump from cavitations in the event of low water level in the tank.

The Water Sediment Filter helps to protect the Humidifier Tank by reducing the sediment build-up in the tank.

## 9.2 Water Supply

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

One 3/4” (1.9cm) garden hose female thread for the water supply from the exterior of the mobile self-propelled unit. (incoming)

One 3/4” (1.9cm) outer diameter copper drain line with a male threaded hose connector from the steam cylinder for automatic drain cycles and sink. The drain penetrates the floor of the mobile self-propelled unit in order to empty to the exterior. (Drainage)

## 9.3 Humidity Controller



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 Equipment Room on the right hand side of the humidifier.

The relative humidity setting for the mobile self-propelled unit is 35%. The humidifier must not be altered from its factory setting.



**Figure 32: Humidity Controller**

## 9.4 Humidity Settings



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 120V AC power via a 20 amp, single-phase breaker.

A humidistat is connected to the humidifier via a controlling transformer cable. The connection at the humidifier is on the #1 and #2 terminations on control terminal block.

## **9.6 Instructions**

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

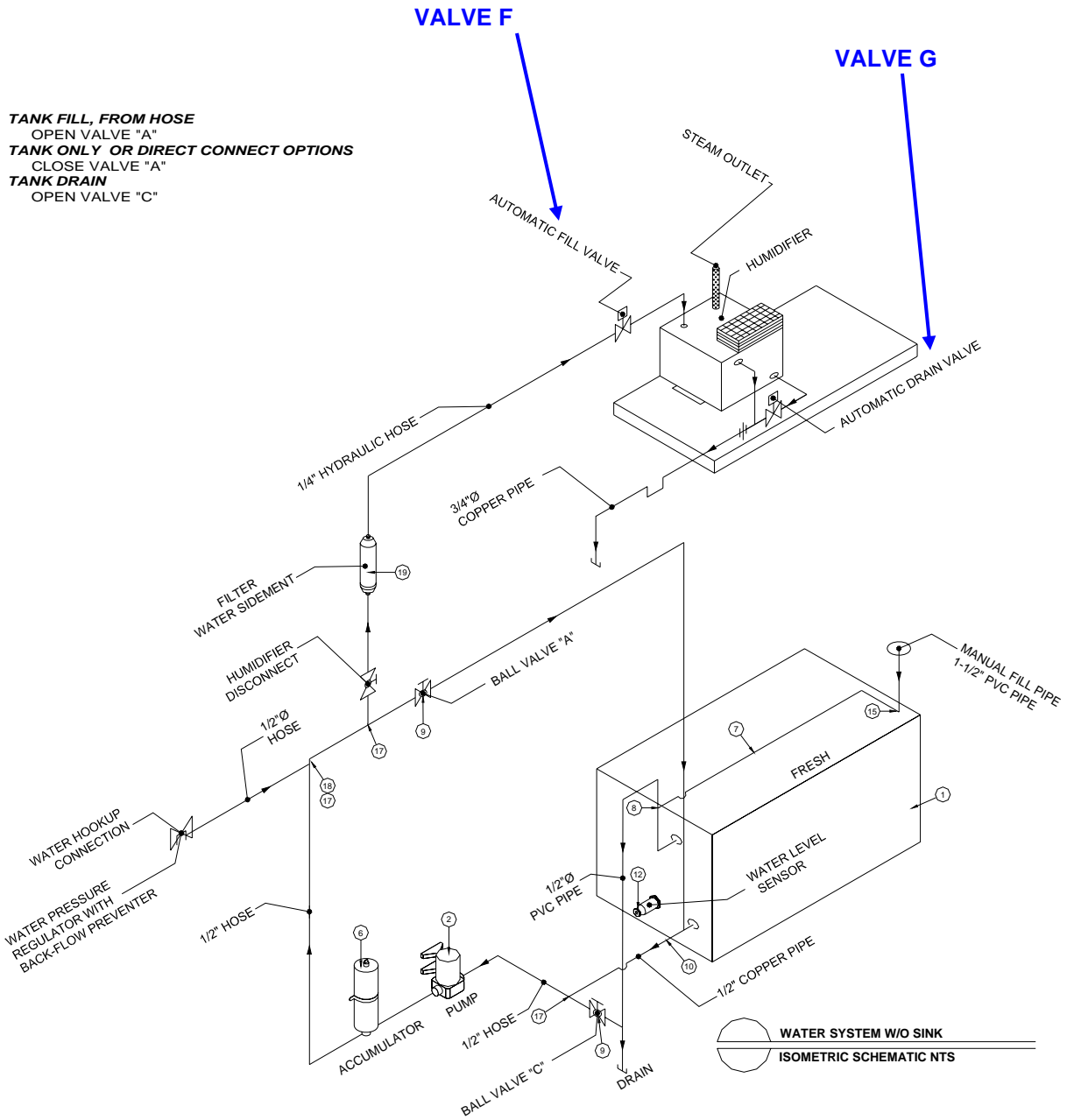
Please refer to the product manual located in the literature provided by Oshkosh Specialty Vehicles.

To attach the water supply lines follow the procedure below:

1. Remove the cap that covers the fresh water connection. Refer to [Figure 33: Fresh Water Connection](#).
2. Attach the supplied water hose to this fresh water connection.
3. Attach the other end of the hose to facility provided fresh water faucet.
4. Turn on the water at the faucet.
5. Open Ball Valve "A". Refer to [Figure 34: Humidifier Isometric Schematic](#) for location.
6. This will fill the water tank for the mobile unit. When the tank is full, close Ball Valve "A". If necessary, the fresh water tank can be filled by pouring water directly into the manual fill pipe.
7. In the event that the water tank is overfilled, an overflow drain has been provided that exits outside of the mobile unit.
8. In order to supply fresh water directly from the facility to the humidifier close Ball Valve "A". Refer to [Figure 34: Humidifier Isometric Schematic](#) for location.



**Figure 33: Fresh Water Connection**



**Figure 34: Humidifier Isometric Schematic**

## **9.7 Humidifier Drain / Flush Feature**

In order to reduce the build-up of mineral deposits in the humidifier tank, a drain and flush cycle is incorporated into the system. A timer, factory set on a 40-hour cycle, electrically controls Valve “G” (Drain Valve). Upon activation, Valve “G” opens and begins to drain the surface water and minerals from the tank. As the water level drops, Valve “F” opens to refill the tank. Both valves will remain open for approximately ten minutes flushing the tank. Valve “G” then closes, the tank refills, and Valve “F” closes, completing the drain and flush cycle. The timer resets and the system resumes normal operation.

## **9.8 Maintenance**

Due to the Drain and Flush feature, the Humidifier system is basically maintenance free.

The Water Sediment Filter should be replaced every 90 days to reduce sediment build-up in the humidifier tank. The filter is located in the underbody compartment with the water storage tank.

It is mounted on the ceiling of the compartment between the compartment door and the dome light. See [Figure 35: Humidifier Water Sediment Filter](#) below for location.



**[Figure 35: Humidifier Water Sediment Filter](#)**



## Section 10: HVAC System



The HVAC system is critical to the operation and the 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. NEVER change these settings.



The medical system requires the HVAC system to be supplied power at all times. Generator power is used while the mobile self-propelled unit is being transported, and shore power can be used while the mobile self-propelled unit is in the parked position.



A/C Unit

**Figure 36: A/C Unit**

One air conditioning unit is used to maintain the internal environment of the mobile self-propelled 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 their 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 self-propelled unit. The HVAC system is not designed to handle areas outside of the mobile self-propelled 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 self-propelled unit, as this will interrupt the intended airflow requirements.

Refer to [Section 15: General Maintenance](#) and [Section 16: Specific Maintenance](#) in order to ensure proper operation of the HVAC system at all times.

## **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.

One single unit provides air conditioning and heating for the mobile self-propelled 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 (-28.9°C to 43.3°C).

## **10.3 Interior HVAC Specifications**

The air conditioner has a cooling capacity of 36,000 BTUH. The temperature in each room is maintained at approximately 70°F (21°C) with an acceptable range of 68°F to 72°F (20°C to 22.2°C). 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 (20°C). 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.

Air is returned to the air conditioner via ceiling vents located throughout the mobile self-propelled 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 filter is provided at the air return duct of the air conditioning and heating unit. This filter provides dust free air throughout the interior of the mobile self-propelled unit. The air filter is accessible through the exterior of the unit through the HVAC access panel.

#### **10.4 Humidistat Temperature Setting**



The HVAC system is critical to the operation and the 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 setting is the control that is used to adjust the Humidistat.

The Humidistat must not be set outside of the parameters as defined by the medical system manufacturer.



**Figure 37: Humidistat Control**

## **10.5 Thermostat Control**

The temperature setting is controlled by the use of thermostat. The Thermostat must not be set outside of the parameters as defined by the medical system manufacturer.



**Figure 38: Thermostat Temperature Control**



## Section 11: Intrusion Alarm (optional)

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



**Figure 39: Intrusion Alarm Keypad**

### 11.1 Operation

The alarm is operated via a keypad located inside the unit, to the right of the exam room. When entering the mobile self-propelled unit, the operator keys in a code to deactivate the alarm. When leaving the mobile self-propelled unit, the operator keys in a code to activate the alarm. If the staff entry door, Wheelchair Lift door, or Equipment Loading door are opened while the alarm is activated, a siren will sound.

For additional information, please refer to the OEM supplied literature. The literature can be found in the product information binders that have been included with the mobile self-propelled unit.

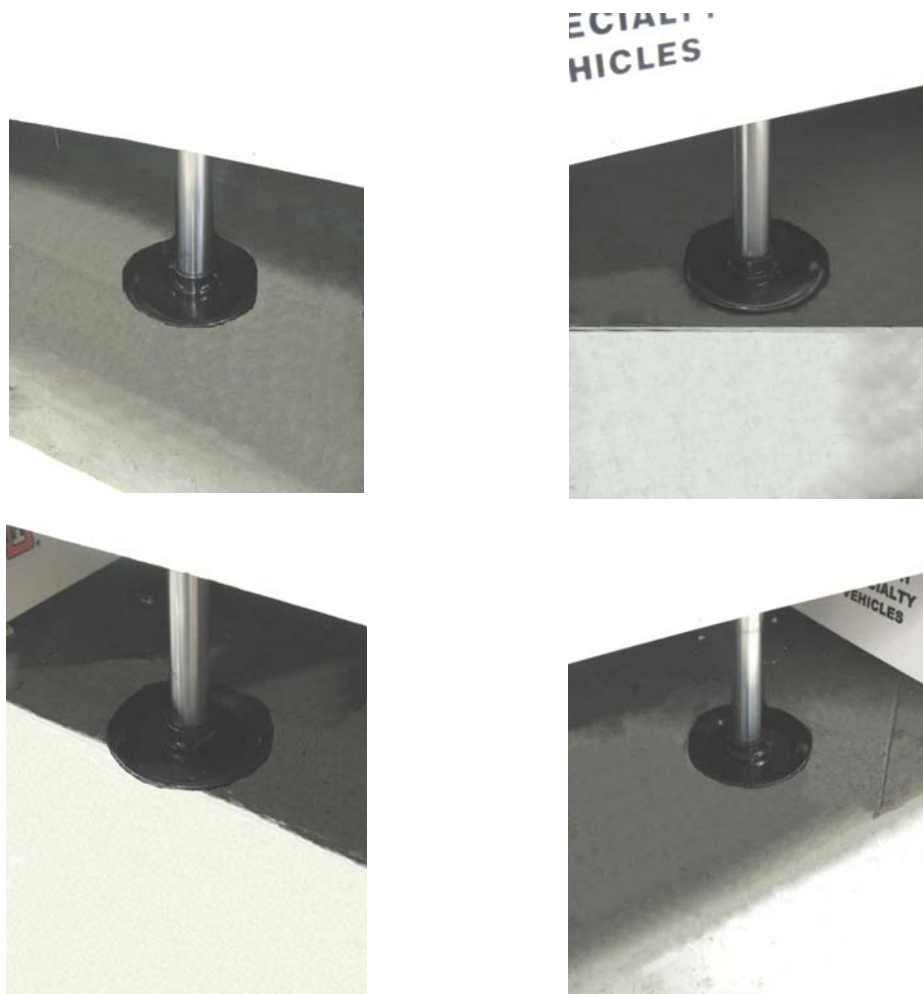


## Section 12: Stabilizing Legs



Under no circumstances should the stabilizing legs and the rear air suspension be used to lift the mobile self-propelled 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 self-propelled unit.

Four, 15,000-pound capacity hydraulic legs are installed for stabilization and proper leveling of the unit. The stabilizing legs installed on this mobile self-propelled unit are only for the purpose of parking and stabilizing the unit. For additional information, please refer to the OEM supplied literature. The literature can be found in the product information binders that have been included with the mobile self-propelled unit.



**Figure 40: Stabilizing Leg Assembly**



**Figure 41: Stabilizing Leg Control Panel**

Stabilizing Leg:	Allows the mobile self-propelled unit to be parked and stabilized for the proper operation of the medical equipment.
Sand Shoe:	Helps prevent the stabilizing legs from sinking due to weight.
Stabilizing Leg Control Panel:	The control box houses the stabilizing leg controls.
Levels:	Allows the mobile self-propelled unit to be leveled both front to back and side to side.
Lever 1:	Front Left side leg.
Lever 2:	Front Right side leg.
Lever 3:	Rear Left side leg.
Lever 4:	Rear Right side leg.
Pump ON / OFF Switch	The switch must be held in the ON position when extending or retracting the legs.

## Section 13: Lighting System

The lighting provided for the mobile self-propelled unit can be divided into either interior lighting, or exterior lighting. Listed below are explanations of the lighting provided.

### 13.1 Interior Emergency Lighting



If the main AC power fails, four (2) dual beam emergency lights automatically illuminate.

They are located:

- The Waiting Room.
- The Gantry Room.
- One in each of the two Dressing Rooms.

The emergency lighting system is wired into a 120V AC electrical system that allows the lights to keep their batteries at 100% charge.

The emergency lights will illuminate the emergency exits and last for approximately 90 minutes.

[Figure 42: Emergency Lighting](#)

## **13.2 Exterior Lighting**

### **IMPORTANT**

All warning lights are located on the passengers' side of the mobile self-propelled unit.

The exterior lighting system can be divided as follows. For additional information of the warning lights, please refer to [Appendix B: Troubleshooting](#).

#### **A. 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.

A cord-o-matic drop light with a 50'-0" (15.24m) cable is supplied with the mobile self-propelled unit. There is one droplight aboard the unit, located in Equipment Room. The light is generally used during service applications when additional light is required. The light is plugged into a nearby miscellaneous 120V AC outlet.

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



**[Figure 43: Compartment Light](#)**

**B. Staff Door Lighting / Exterior Service Lighting**

The staff door lighting is provided by a fixture that is located above the staff entry door, above the exterior controls for the hydraulic lift.

This light is meant to illuminate the staff entry as well as the hydraulic lift.

The switch for this light is located inside of the mobile self-propelled unit on the raceway next to the staff door.



Staff Door Entry Light



Left Side Scene Light

**Figure 44: Staff Door and Exterior Service Lighting**

**C. Marker & Running Lights**

When the mobile self-propelled unit is in transit, federal law requires specific illumination characteristics. The mobile self-propelled 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 mobile self-propelled unit. 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 unit.

### **13.3 Interior Lighting**

The interior lighting system can be divided as follows.



**Figure 45: Overall Interior Lighting**



## **13.4 Warning Lights**

Warning lights have been installed on the exterior Left side of the mobile self-propelled unit in order to provide the operator and technician with the status of the 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 the warning lights are illuminated, please refer to [Appendix B: Troubleshooting](#) for additional information.



The medical system and the HVAC system must be supplied power at all times. During transit of the mobile self-propelled unit via the generator and when the unit is in the parked position via shore power.

### **A. Power Indicator, Transport Warning Light, and Power OFF Strobe**

The warning lights are located on the left side of the mobile self-propelled unit.

- The Amber Indicator light is the Power On indicator. This light will be illuminated when the mobile self-propelled unit is receiving power from either power source.
- The Red Indicator light is the Transport warning light. This light indicates that the unit is not ready for transport.
- The Power OFF Strobe flashes when power is not being applied to the unit. The mobile self-propelled unit must have power applied when in transport and when parked for use.



**Figure 46: Warning Lights**

**B. X Ray ON Indicator Light**

An X Ray ON Indicator Light is provide and located above the rear equipment loading door at the right rear side of the mobile self-propelled unit to notify everyone close by that medical procedures are in progress.

X Ray ON Indicator Lights are also located above the Gantry Room entry doors leading from each of the dressing rooms.



Equipment Loading Door



Gantry Room Door Entry

**Figure 47: X-Ray "ON" Indicator Light**

## Section 14: Slide-out



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 Oshkosh 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.



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.



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 in accordance with ANSI Standards.



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

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

This section contains important information in regards to general safety guidelines that must be followed at all times regarding the slide-out. 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.

### 14.1 Slide-out Controls

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

When expanding or retracting the slide-outs, please follow the instructions below;



**Figure 48: Slide-out Controls**



**A. Expanding the Slide-out**

1. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-out.
2. Press and hold the control switch to the Roadside Wall Open position to extend the slide-out.
3. Release the switch when the slide-out is extended.
4. Verify that the slide-out is in the extended position.

**B. Retracting the Slide-out**

1. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-out.
2. Verify that the slide-out is completely extended.
3. Press and hold the control switch to the Roadside Wall Close position to retract the slide-out.

## Section 15: General Maintenance



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.



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.



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 in accordance with ANSI Standards.



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

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

### 15.1 Daily Maintenance

1. Water tank should be checked for proper water levels.
2. Fuel tank should be checked for proper fuel levels.
3. Keep the air intake grills on the computer cabinets for the medical system free and clear of obstructions.
4. Keep the A/C grills clean and free of debris.
5. Remove and clean the lower Generator air intake filter located below the generator after relocating the unit to its next destination.

## **15.2 Weekly Maintenance**

1. Check the A/C filters. Clean and replace if necessary. A/C must be OFF to check and replace filters.
2. Check the oil and water levels in the generator and refill if necessary.
3. Check the electrolyte levels in the DC batteries and fill if necessary using only distilled water.
4. Check all running lights, marker lights, brake lights, and turn signals.
5. A qualified technician should check the tire pressure in accordance pressure recommended by the tire manufacturer.
6. 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.
7. Check wheel lug nuts with torque wrench and make sure that all inner and outer wheels, both the front and rear, are tightened in accordance with the truck chassis manufacturer's specifications.

## **15.3 Monthly Maintenance**

1. Put a few drops of 20W oil, or similar graphite oil, on the swivel pin of all door hinges. Only use dry graphite lubricant on key openings of all door locks.
2. Check the operation of the smoke detectors and vacuum internally.
3. Check the fire extinguisher gauges for safe charges.
4. Inspect the power cables for any damage.
5. Check the cable tie downs.
6. Check for cut, damaged, or loose wire connections.
7. Check and make sure that all connector bolts are tight and secure.
8. A qualified A/C technician must check the A/C condensers every month. Refer to the Air Conditioning Owner's Manual for more information.
9. Lubricate the stabilizing legs.
10. Check wheel lug nuts with torque wrench and make sure that all inner and outer wheels, both the front and rear, are tightened in accordance with the truck chassis manufacturer's specifications.
11. 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 on top of the staging unit in the generator bay. Refer to [Figure 27: Generator](#).
12. Inspect the generator compartment door air filter and clean if necessary with an appropriate water soluble cleaning solution. Rinse with clean water.

## **15.4 Quarterly Maintenance**

1. Once a year, check the fuel separator for contamination or debris.
2. Once a year, perform the preventative maintenance on the stabilizing legs and controls. Refer to the accompanying manual for the landing gear system.
3. Rotate the tires.
4. Check wheel lug nuts with torque wrench and make sure that all inner and outer wheels, both the front and rear, are tightened in accordance with the truck chassis manufacturer's specifications.





## Section 16: Specific Maintenance



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.



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.



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 in accordance with ANSI Standards.



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

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.



Image quality can be impaired with improper door closer adjustment.



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



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

### 16.1 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.

### 16.2 Electrical System

1. Inspect the power cables for any damage.
2. Check the cable tie downs.
3. Check for cut, damaged, or loose wire connections.
4. Check and make sure that all terminal connectors are tight and secure.

### **16.3 Generator System**

1. 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 in the generator bay. Please refer to refer to [Figure 27: Generator](#).
2. Once a year, check the fuel separator for contamination or debris.

### **16.4 Humidity System**



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 levels must be maintained at all times. Follow the steps outlined below and please refer to [Section 9: Humidity System](#) if necessary.

1. Check the water tank to determine the water level.
2. Open valve "A".
3. Attach one end of a hose to the exterior water tank fill valve and the other end to the shore supply.
4. Turn on the water source to begin filling the tank.
5. After the water tank is full, turn off the water source.
6. Detach the hose at both ends and place in the underbody storage compartments.
7. Close valve "A".

### **16.5 HVAC System**



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.

1. The HVAC system is designed specifically to maintain only the internal environment of the mobile self-propelled unit. The HVAC system is not designed to handle areas outside of the mobile self-propelled unit such as adjoining corridors or hallways.
2. It is important to be sure that the doors, partitions, and baffling are in the intended positions before running the medical system.
3. 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.
4. A qualified A/C technician must check the A/C condensers every month. Refer to the Air Conditioning Owner's Manual for more information.

## **16.6 Stabilizing Legs**

1. Once a year, perform the preventative maintenance on the stabilizing legs and the stabilizing leg controls. For additional information, please refer to the OEM supplied literature. The literature can be found in the product information binders that have been included with the mobile self-propelled unit.
2. Change the oil in the stabilizing leg control box and refill with six (6) quarts (5.7 liters). Use only AWF all weather fluid Automatic Transmission Fluid.
3. Add one pint of permanent anti-freeze as necessary.
4. Extend the stabilizing legs and coat lightly with clean grease.
5. Grease the alemite fittings and check the valve on each leg. Use "NGLI" lithium grease with a grade of "00" or "0".
6. Check the fittings and the hydraulic lines for leaks or worn spots. Replace all defective fittings and lines as necessary.
7. Check for loose bolts and nuts. Tighten as necessary.



## Appendix A: Mobile Self-propelled Unit Checklist



It is the operator's responsibility to make sure that the shore power receptacle is of the same type and voltage as the connection that is supplied by Oshkosh Specialty Vehicles.

Failure to do this can result in injury or death to the operator of the mobile self-propelled unit as well as irreparable damage to the mobile self-propelled unit.



Before connecting or disconnecting from shore power, make sure that the shore power contactor disconnect switch be moved to the "OFF" position. Failure to do this can result in injury or death to the operator of the mobile self-propelled unit.



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.



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 in accordance with ANSI Standards.



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



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



Always inspect the power cable, connectors, and fasteners before 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.



The stabilizing legs and rear suspension are not to be used to raise the mobile self-propelled 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 self-propelled unit from the ground, serious damage may occur to the mobile self-propelled unit.



Before transporting the mobile self-propelled unit, check to make sure all warning lights as well as all exterior marker lights are working correctly.



If the mobile self-propelled unit is on uneven ground, the provided aluminum shims can be used to help level the mobile self-propelled unit. Only use the shims that have been provided by Oshkosh Specialty Vehicles.

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



## **Mobile self-propelled Unit Set up Checklist**

1. Park the mobile self-propelled unit on the pad per the site-planning guide.
2. Lower the stabilizing legs.
3. Re-level the mobile self-propelled unit as needed.
4. Set up the foldout Stair Assembly.
5. Make sure that the shore power disconnect is in the OFF position and connect to the power cable to the shore power receptacle.
6. Move the shore power disconnect to the ON position. The ATS will automatically switch from generator power to line power and shut down the generator.
7. Connect the phone and data lines.
8. Connect the humidifier water supply connection.
9. Remove restraining hardware.
10. Prepare all medical equipment for use per the OEM provided instructions.
11. Extend the Slide-out.

## **Mobile self-propelled Unit Transport Checklist**

1. Secure the medical system per OEM instructions that are posted on the scan room wall.
2. Secure all moveable objects such as chairs, monitors, doors, cabinets, cameras, and printers.
3. Retract the Slide-out.
4. Make sure that the shore power disconnect is in the OFF position and disconnect the power cable from the shore power receptacle and store it in the underbody compartment. The generator will automatically start and transfer from Line power to Generator power.
5. Disconnect the humidifier water supply connections.
6. Disconnect the phone and data lines.
7. Raise the Stabilizing Legs.
8. Make sure that all doors including lower compartments are closed and locked.
9. Make sure that the mobile self-propelled unit is ready for transport.
  - a. Are all exterior doors closed and locked?
  - b. Are all running & marker lights working correctly?
  - c. Are any warning lights illuminated?
  - d. Is the fuel tank full?
  - e. Is the generator running?





## Appendix B: Troubleshooting

If the following troubleshooting guides do not correct the problem, please refer to the OEM supplied literature and the list of local service representatives, which can be found in the product information binders that have been included with the mobile self-propelled unit, or contact Oshkosh Specialty Vehicles for service.

### Power Indicator Light is off...

If the Power Indicator Light is "OFF" then the mobile self-propelled unit is not receiving power. The mobile self-propelled unit must receive power at all times, either from the on-board generator or from a shore power connection.

If the mobile self-propelled unit is at a facility and connected to shore power, the unit must be switched to generator power.

If the mobile self-propelled unit is being transported, shore power must be established as soon as possible.

Please refer to the OEM supplied literature, the list of local service representatives, or contact Oshkosh Specialty Vehicles for service. The OEM supplied literature and the list of local service representatives can be found in the product information binders that have been included with the mobile self-propelled unit.

#### **Generator Power is connected when the Power Indicator light is off...**

1.	Make sure that the fuel tank has fuel.
2.	Make sure that the selector switch for the generator has been moved to the START position.

**Humidity is out of specifications...**

The humidity settings for the mobile self-propelled unit are 35% RH to 40% RH (relative humidity). If the mobile self-propelled 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 self-propelled 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 self-propelled 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.	Make sure that the humidifier is set between 35% and 40% RH (relative humidity). If the humidifier is still running constantly, contact Oshkosh Specialty Vehicles for service.
The humidity inside of the mobile self-propelled 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 self-propelled 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 make sure that the humidifier is set between 35% and 40% RH (relative humidity). If the humidifier is running and the humidity level does not change, a problem exists within the humidity system.
	5	Make sure sufficient water in the humidifier tank.	Fill tank as needed.



### Temperature is out of specifications...

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

<b>Problem:</b>		<b>Check for:</b>	<b>Solution:</b>
The temperature inside of the mobile self-propelled 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 self-propelled 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, make sure 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 settings are correct.	Make sure that the Thermostat is set at 68°F. Please contact Oshkosh Specialty Vehicles for further assistance.
<b>Problem:</b>		<b>Check for:</b>	<b>Solution:</b>
The temperature inside of the mobile self-propelled 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 self-propelled 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, make sure 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 settings are correct.	Make sure that the Thermostat is set at 72°F. Please contact Oshkosh Specialty Vehicles for further assistance.





## Appendix C: HVAC Set Points



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.



Make sure 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 (22.2°C). If the ambient temperature in the mobile self-propelled unit rises to 72°F (22.2°C), the HVAC system will automatically start in order to cool the unit.

The low temperature sensor is set at 68°F (20°C). If the ambient temperature in the mobile self-propelled unit drops to 68°F (20°C), the HVAC system will automatically start in order to warm the unit.

### Humidity Settings

The humidistat set point is 35% relative humidity.



## **Appendix D: A-1 Circuit Malfunction Checklist**

### **Category 1**

Visual Checks – Check for the most common occurrences.

Is the mobile self-propelled unit on shore power or under power via the full support generator?

### **Category 2**

Component Checks – (some tools are required).

Check the emergency off button in Control Room. Normally Open (N.O.)?

Check the emergency off button in Gantry Room. Normally Open (N.O.)?

For additional troubleshooting, please contact Oshkosh Specialty Vehicles for assistance.





## Appendix E: Lockout/Tagout Procedures

### Specific Energy Control Procedures

#### A. Machine or Equipment for this Procedure:

Specialty Vehicle Self-propelled Unit: **GE Senographe Essential Mammography System**

#### B. Control of Hazardous Energy:

Type of Hazardous Energy		When is it Necessary to Lock Out
Electrical	240V AC	When servicing main electrical power line
Electrical	120/240V AC room circuits	When servicing or performing installation inside specific sections of the trailer
Electrical	12V DC	When servicing the following: Generator, Wheel Chair Lift, Hydraulic System, Digital Levels, Lights
Electrical	12V DC From Battery	When servicing the following: Generator, Wheel Chair Lift, Hydraulic System, Digital Levels, Lights

#### C. People to notify when the Specialty Vehicles Unit is to be Locked Out:

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

**D. Shut down specifications for the Specialty Vehicle Self-propelled Units:**

<b>Energy Type and Rating:</b>	<b>Type of Energy Isolating Device:</b>	<b>Location of Energy Isolating Device:</b>	<b>Lockout Device Used:</b>
Main power feed Electrical 240V AC	Circuit Breaker or Plug	Normally located above the Facility Power Shore	Lock and tag with or without lockout hasp
Main power feed Electrical 240V 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 120V AC	Wall switch or circuit breaker	120V AC 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	At left side of vehicle, inside forward service panel, on front of Generator control cover.	Lock and tag with a Circuit Breaker Lockout attachment device
Electrical 12V DC from Converter/Battery charger	Individual circuit fuses on Converter/Battery charger	At right side of vehicle, inside service panel, remove individual circuit fuse	Remove individual fuse and tag
Electrical 12V DC Power to lift panels From Battery	Remove Battery Cables	At right side of vehicle, inside service panel, On battery	Lock and tag with a Plug Lockout attachment device
Medical System GE Mammography	Circuit Breaker	120/240V AC Distribution Panel in equipment area	Lock and tag with or without lockout hasp
Air Conditioning System	Circuit Breaker	120/240V AC Distribution Panel in equipment area	Lock and tag with or without lockout hasp
Heating System	Air Conditioning Circuit Breaker	120/240V AC Distribution Panel in equipment area	Lock and tag with or without lockout hasp

**E. Methods to dissipate energy:**

N/A

**F. Method of Make sureing the Isolation of the Machine or Equipment:**

Voltmeter



# Appendix F: Quarterly Maintenance Checklist



## PREVENTIVE MAINTENANCE CHECKLIST

Company Performing Preventive Maintenance:

Service Technician:

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



<b>Truck</b>	<b>3M</b>	<b>6M</b>	<b>9M</b>	<b>12M</b>	<b>Comments</b>
Load test van battery (lift)					
Make sure van battery charger					
Inspect bay door shocks/hardware					
Make sure bay light operation					
Check door hinges/stops/latches for proper operation					
Inspect Slide outs for operation					
Inspect Slide out compressor					
Empty compressor drain and make sure Y-strainer is cleaned out					
Check Fire system Last Inspection Date _____					
Inspect stair mounts					
Inspect interior flooring					
Make sure bay heater operation					
Inspect cabinet latches and hinges					
Make sure phone/communication lines					
Make sure hub fluid levels					
Inspect undercarriage/frame					
Inspect airbags/airlines/fittings					
Inspect shocks/bushings					
Inspect Tires / Rotate as needed					
Note hub meter mileage _____					

<b>Generator</b>	<b>3M</b>	<b>6M</b>	<b>9M</b>	<b>12M</b>	<b>Comments</b>
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					
Make sure radiator coolant level					
Make sure coolant freeze point & pH					
Make sure block heater operation					
Inspect housing mounting bolts					
Inspect muffler/brackets					
Make sure battery charging voltage					
Load test battery/clean terminals					
Make sure voltage & hertz output					
Record hours run since last P.M. (_____) Recorded Generator Hours					
Inspect & Clean Lower Air Filter					
Inspect & Clean Compartment Door Air Filter					



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					
Make sure humid control set point					
Inspect/fill water reservoir					
Clean fill and drain valves					
Make sure 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: \_\_\_\_\_

