

## 9. Shipping Container

### • Introduction

This document describes the procedures to remove the GNIRS instrument from the shipping container and to install it into the container for shipping. These procedures must be followed in the order listed below to prevent damage to the instrument and injury to personnel.

### 9.1 Procedures To Remove Instrument From Shipping Container

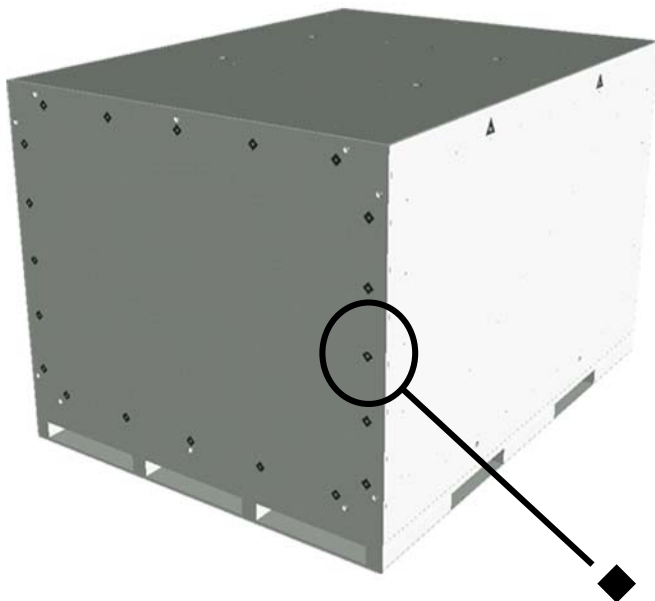
#### • Danger

The GNIRS instrument shipping container has pressurized shock absorbing mounts inside that are intended to protect the instrument from damage due to impact loads during shipping. These mounts must be de-pressurized prior to disassembly of the container. The removal procedures address this and describe the steps required to safely remove the instrument from the shipping container. It is therefore imperative that the removal procedures defined below be followed in the order presented.

**DANGER: THE INSTRUMENT REMOVAL PROCEDURES MUST BE FOLLOWED TO PREVENT DAMAGE TO THE INSTRUMENT OR INJURY TO PERSONNEL.**

### PROCEDURES

#### 9.1.1 END PANEL REMOVAL



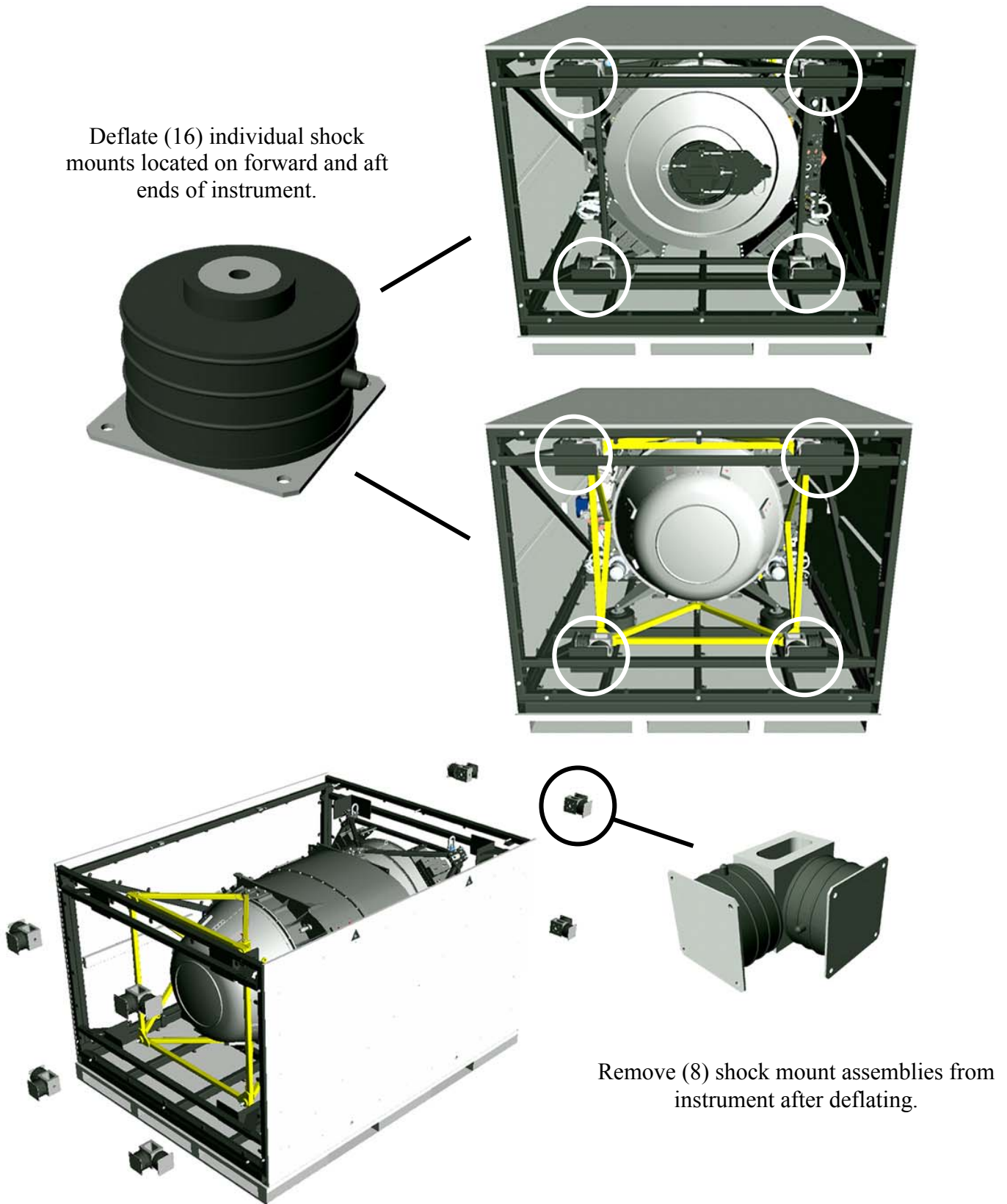
Remove (20) M6 Flat Head Socket Screws on each end panel designated with the symbol:



Remove Plywood End Panels.

### 9.1.2 SHOCK MOUNT DEFLATION & REMOVAL

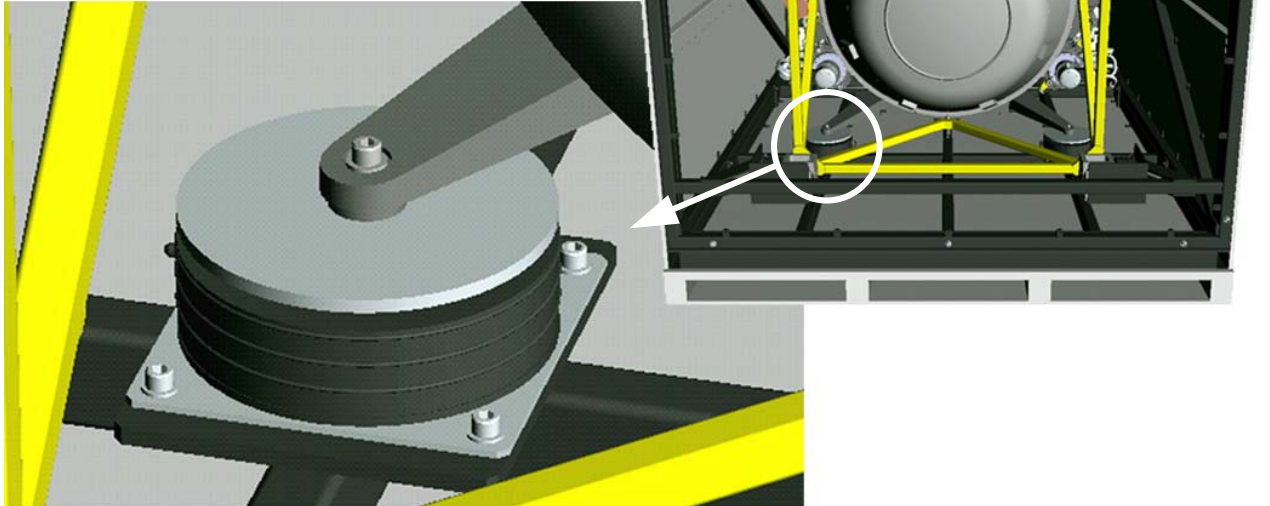
Deflate (16) individual shock mounts located on forward and aft ends of instrument.



Remove (8) shock mount assemblies from instrument after deflating.

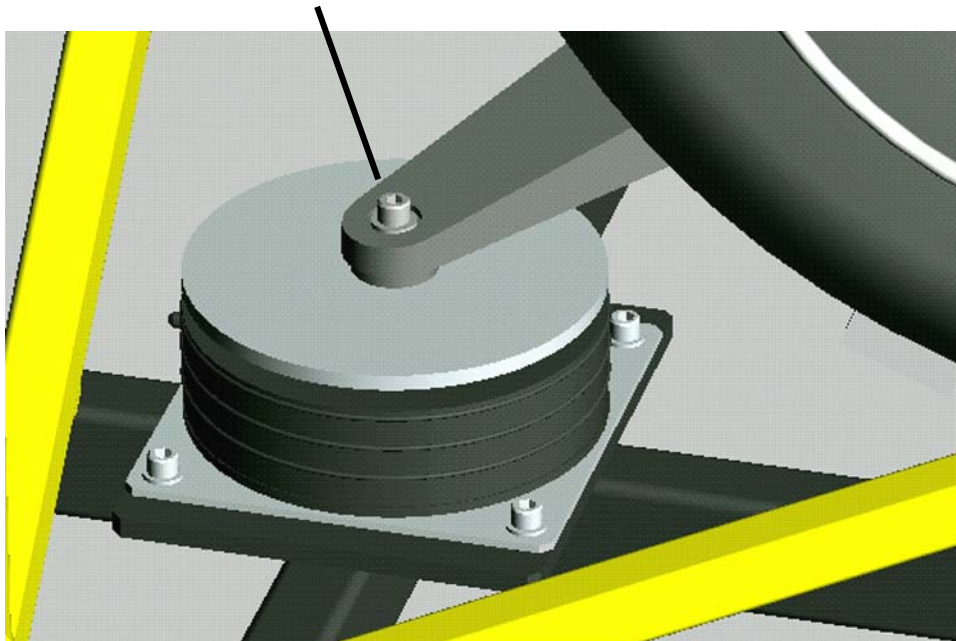
### 9.1.2 SHOCK MOUNT DEFLATION & REMOVAL (CONTINUED)

Deflate (4) shock mounts located on “feet” of instrument.



### 9.1.3 INSTRUMENT HOLD DOWN BOLT REMOVAL

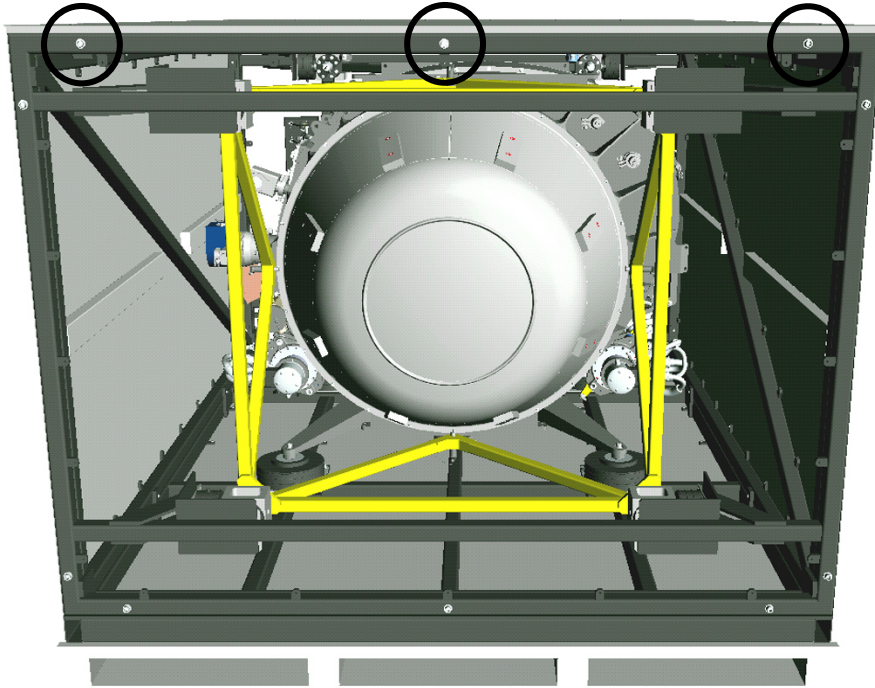
Remove (4) 1/2 -20 x 2.25 Long Socket Head Cap Screws from instrument “feet”.



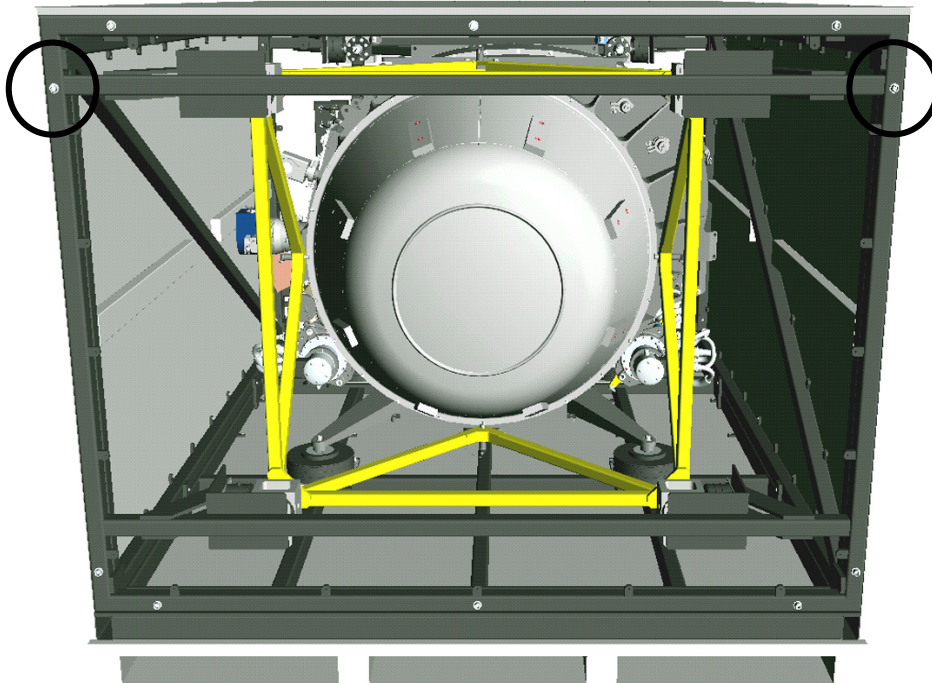


### 9.1.4 TOP PANEL REMOVAL

Remove upper (3) M12x120 Long Socket Head Cap Screws on 2 End Panel Frames.

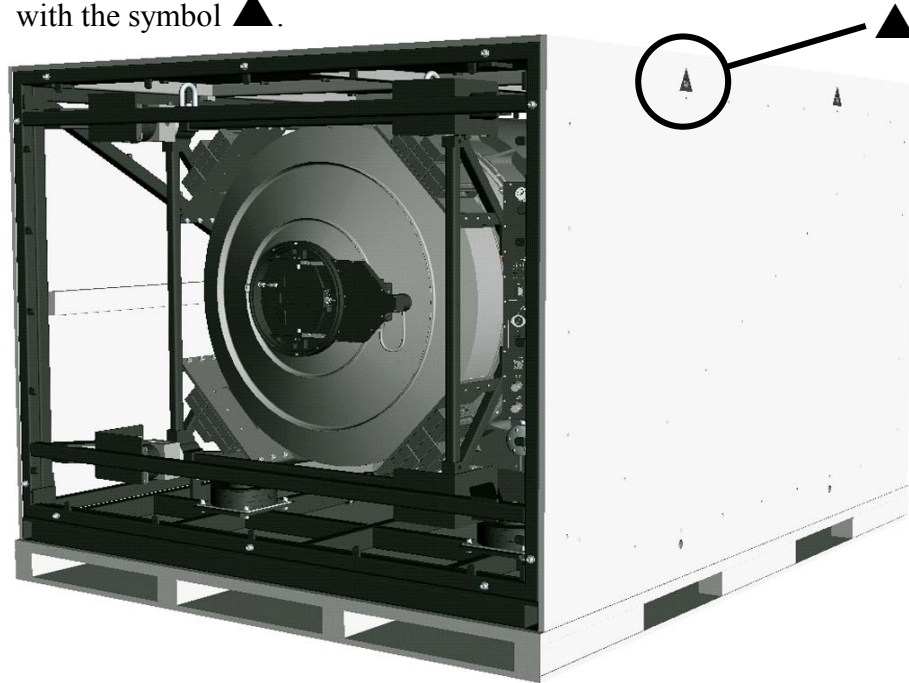


Loosen, but do not remove (2) M12x120 Long Socket Head Cap Screws on 2 End Panel Frames.

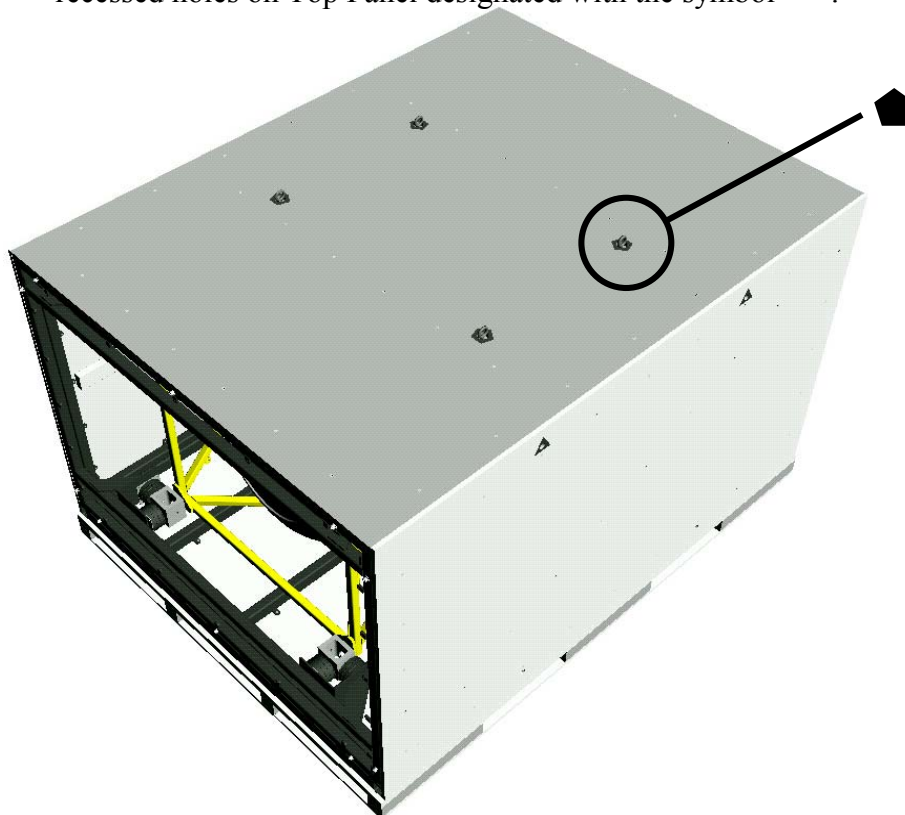


#### 9.1.4 TOP PANEL REMOVAL (CONTINUED)

Remove (2) M10 Socket Head Cap Screws on 2 Side Panels designated with the symbol ▲.

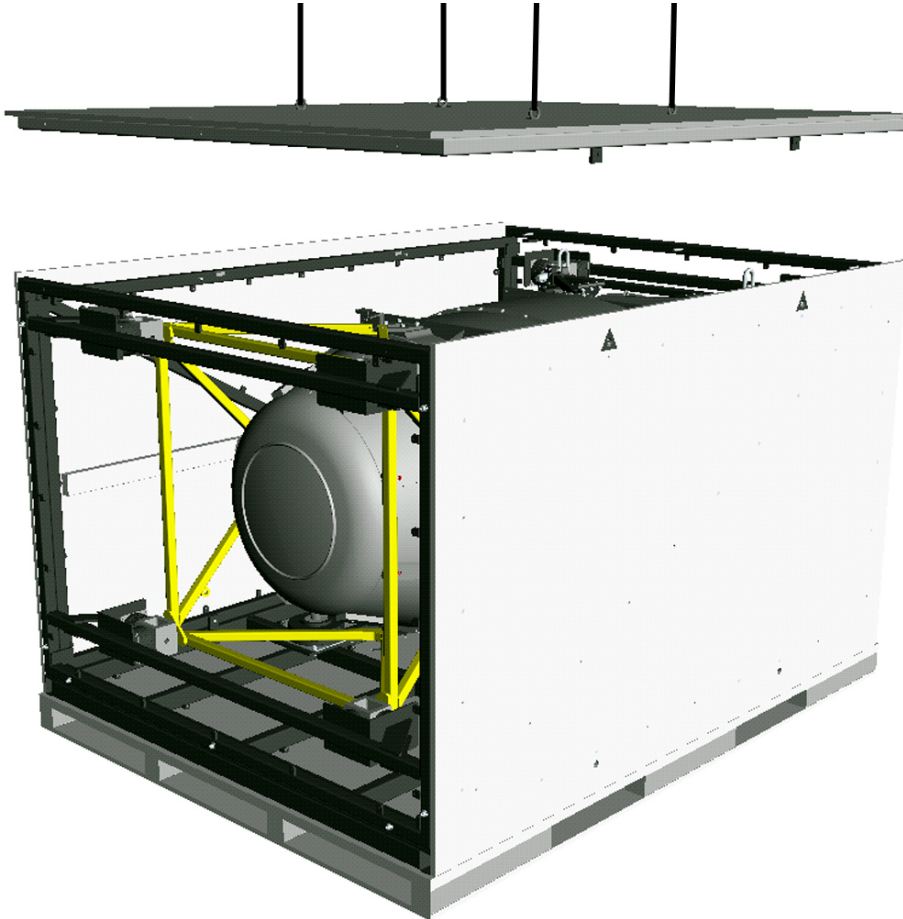


Attach (4) eyebolts and clevis pins to threaded hard points in recessed holes on Top Panel designated with the symbol ▼.



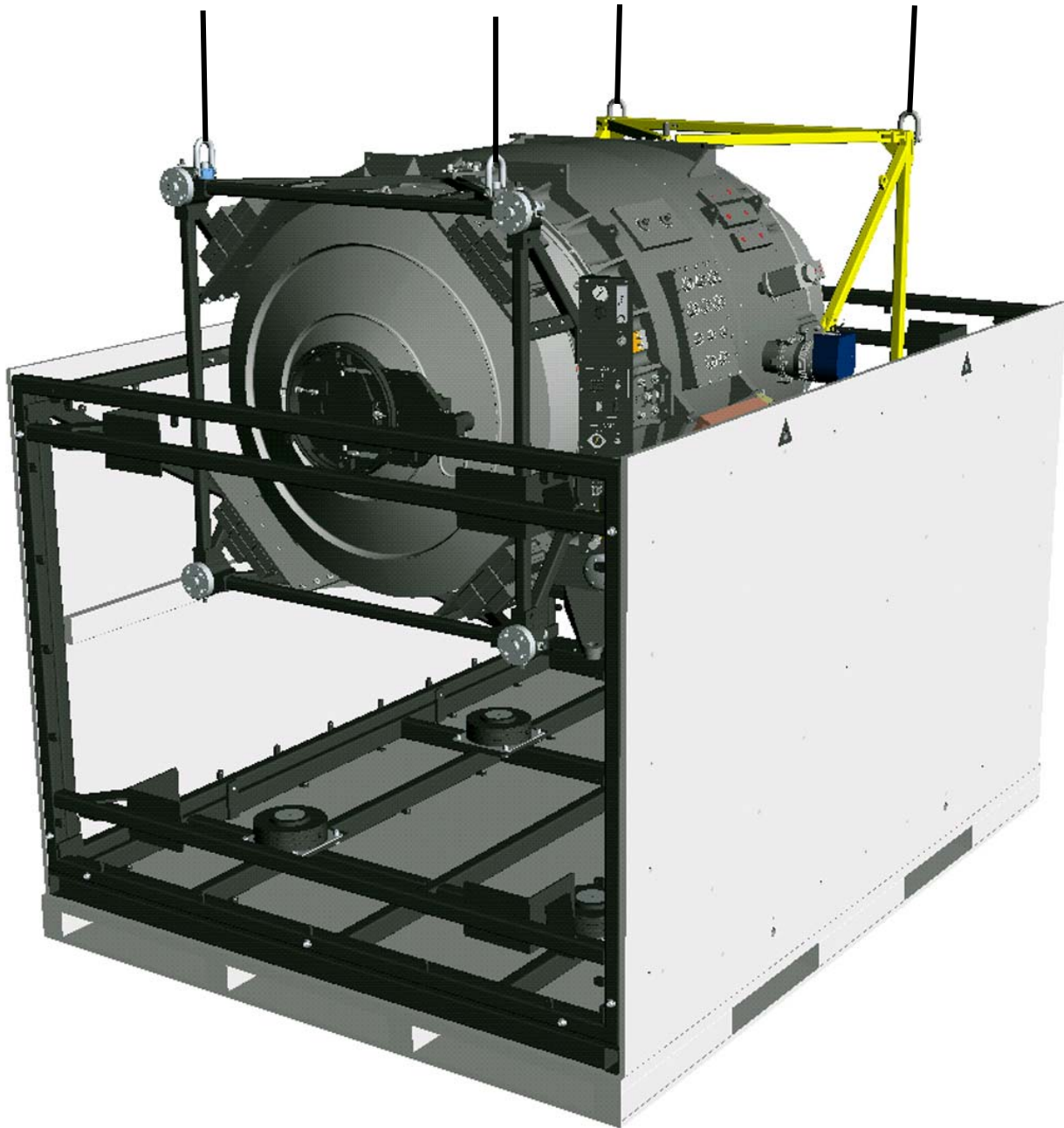
#### 9.1.4 TOP PANEL REMOVAL (CONTINUED)

Lift Top Panel Assembly away from container.





### 9.1.5 LIFTING INSTRUMENT FROM CONTAINER



- Attach (2) lifting swivel rings to upper aft truss.
- Attach (4) lifting straps to lifting points on instrument trusses (2 forward, 2 aft).
- With crane lift instrument out of box. Note: Instrument weight ~1650 Kg.

### 9.1.5 LIFTING INSTRUMENT FROM CONTAINER (CONTINUED)



Lower instrument onto handling cart.



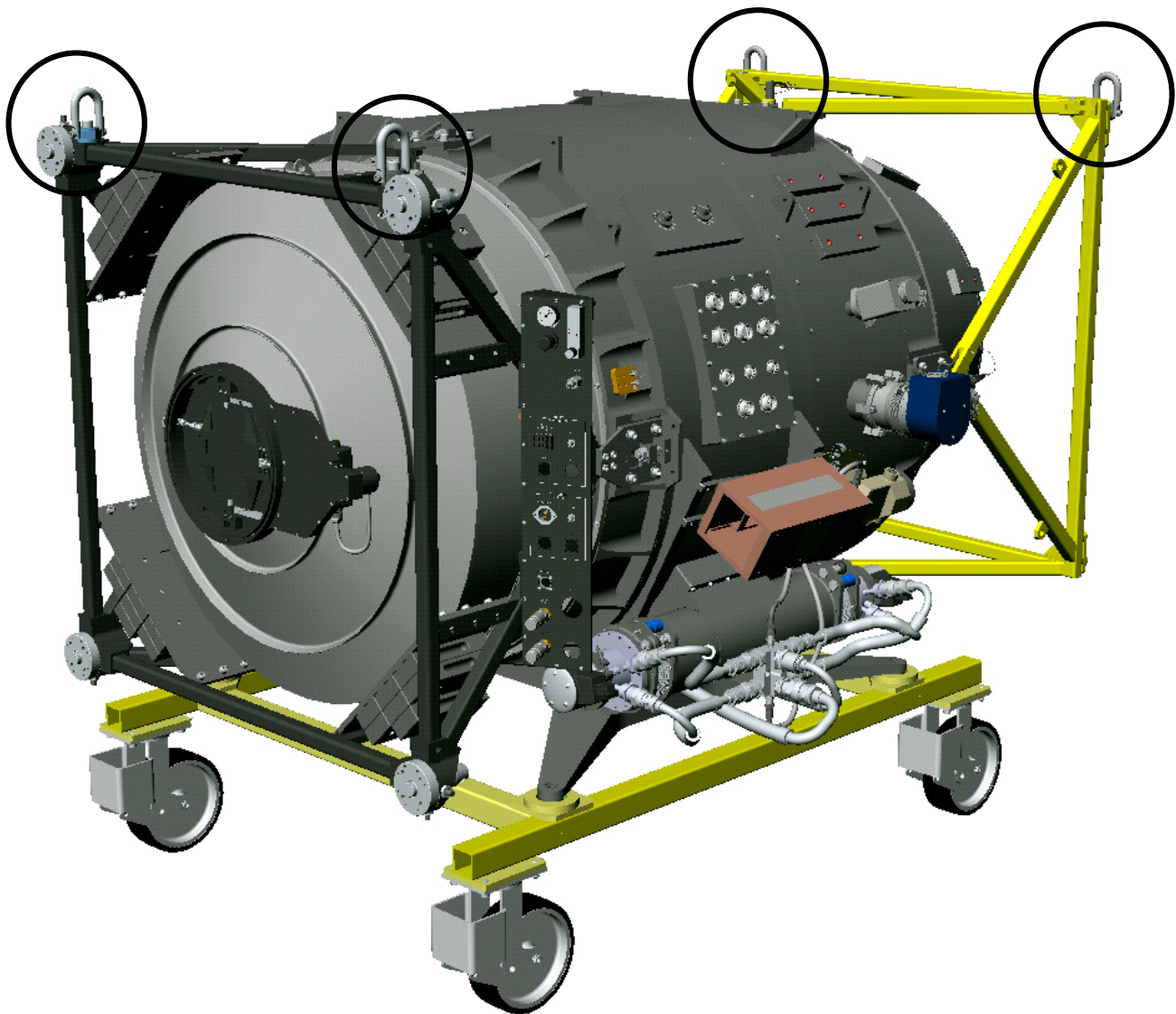
## 9.2 Procedures To Install Instrument into Shipping Container

Prior to installing the instrument into the shipping container, the following components must be removed from the instrument to ensure proper fit into the shipping container:

- Port TEC box and mounting truss
- Starboard TEC box and mounting truss
- Detector Pre-Amp Box
- (Optional) OIWFS Pre-Amp Box

### 9.2.1 INSTALLING LIFTING HARDWARE

- Attach (4) lifting swivel rings to trusses.
- Attach (4) lifting straps to lifting points on instrument trusses (2 forward, 2 aft).

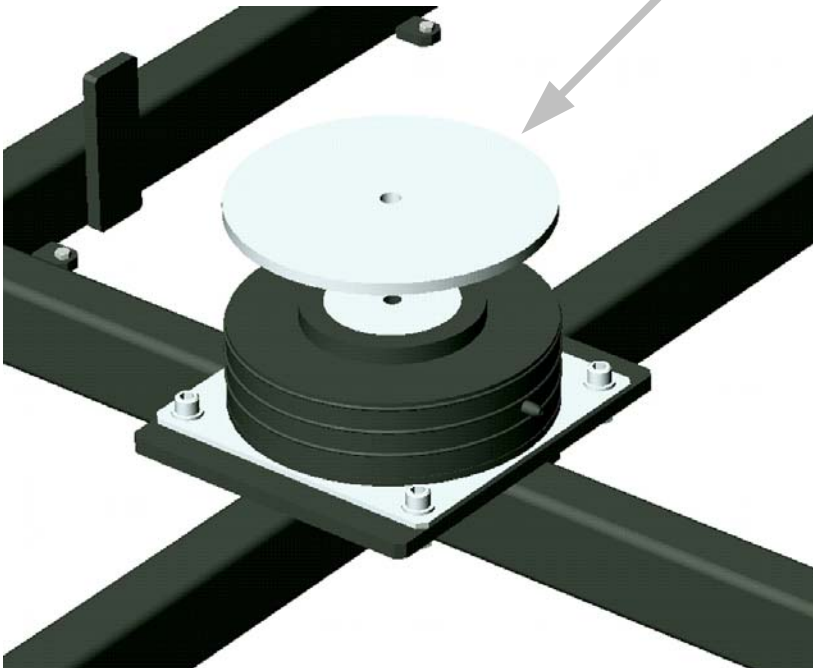
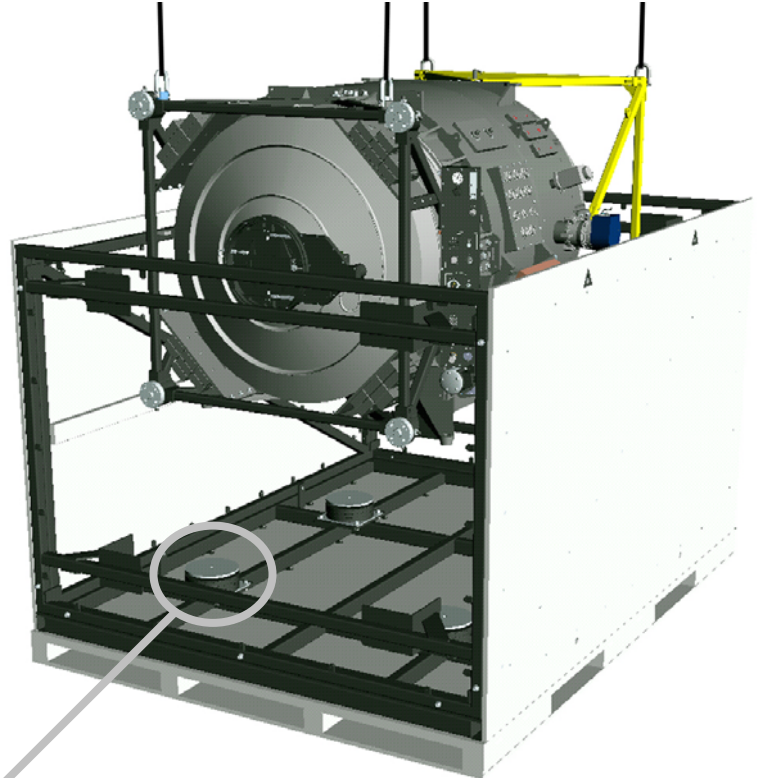


## 9.2.2 LIFTING INSTRUMENT INTO SHIPPING CONTAINER

Lift instrument from handling cart.



Lower instrument into shipping container.

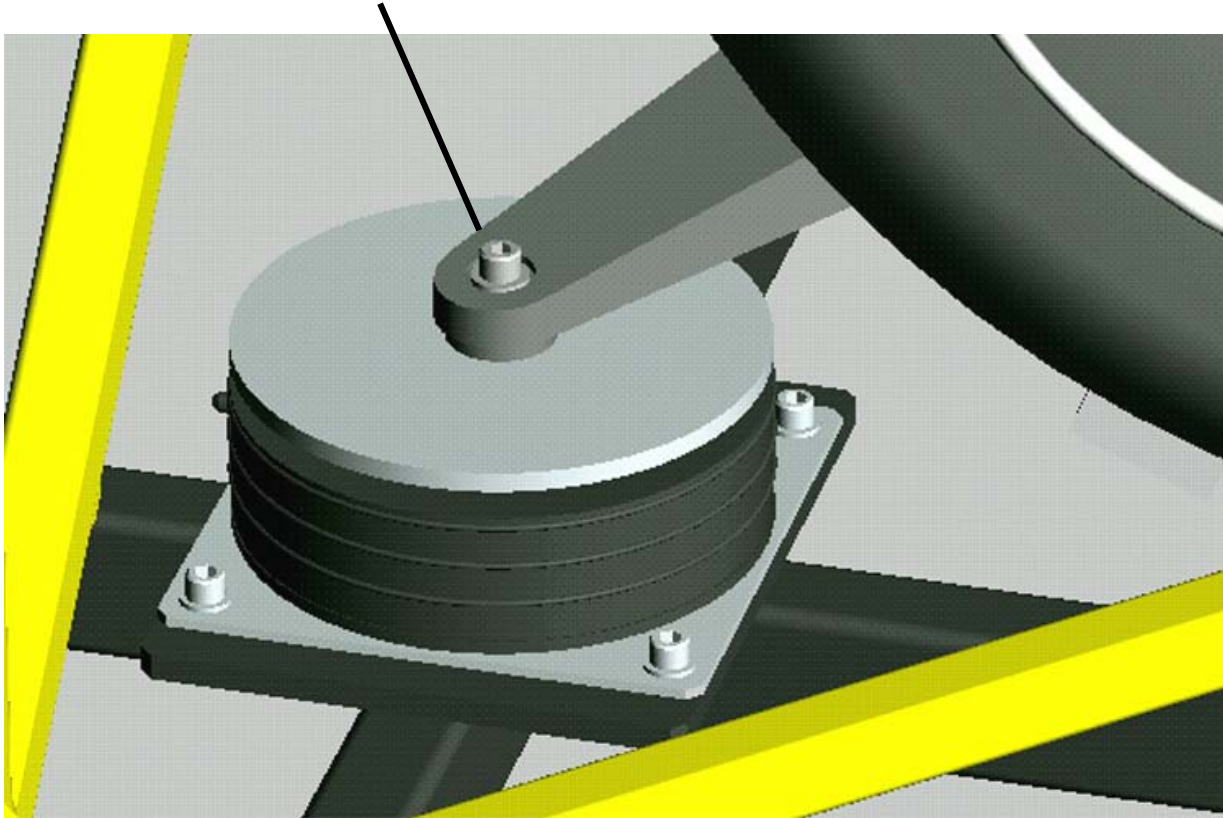


Insert circular plate over inflatable shock mount prior to setting instrument onto shock mount.

**Caution:** Failure to install circular plate will cause damage to shock mount when weight of instrument is applied.

### 9.2.3 INSTRUMENT HOLD DOWN BOLT INSTALLATION

Install (4) 1/2 -20 x 2.25 Long Socket Head Cap Screws and washers onto instrument “feet”.



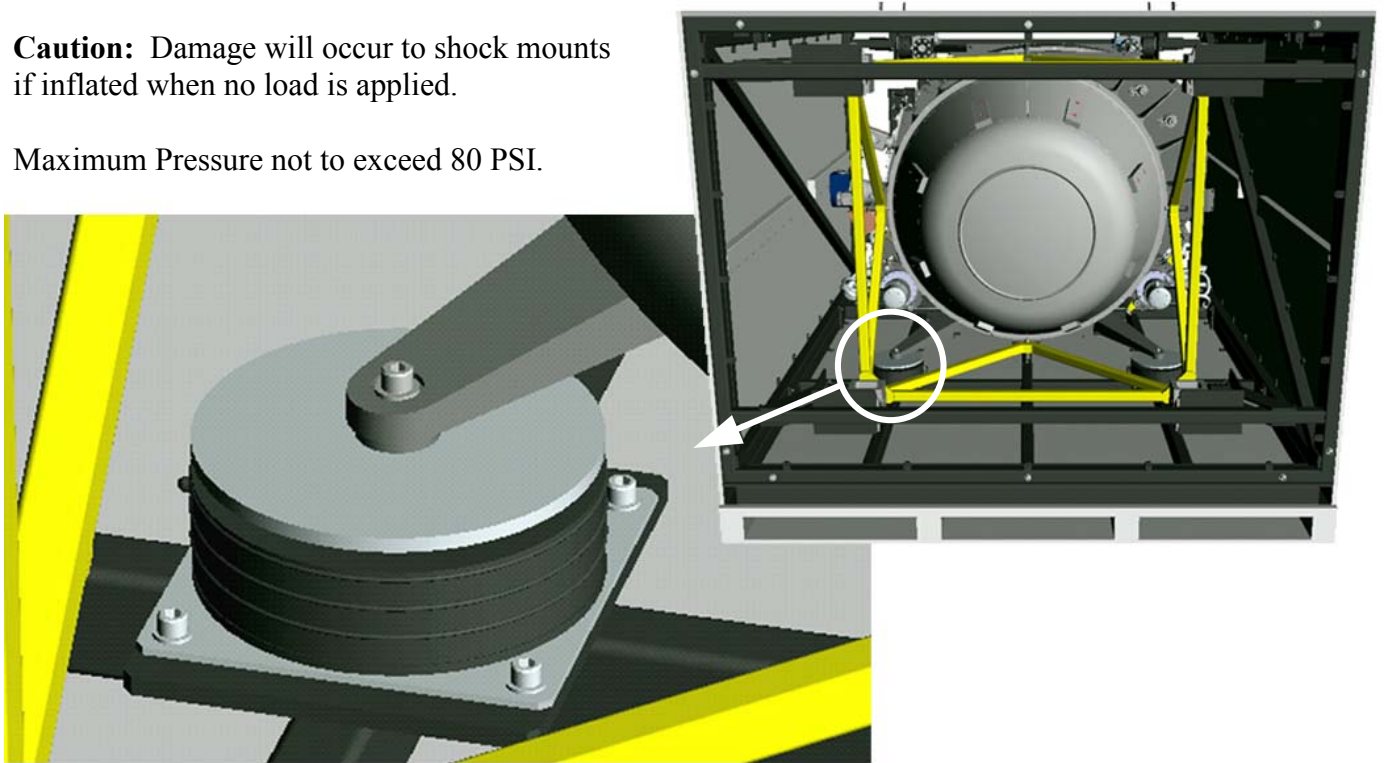


## 9.2.4 SHOCK MOUNT INFLATION

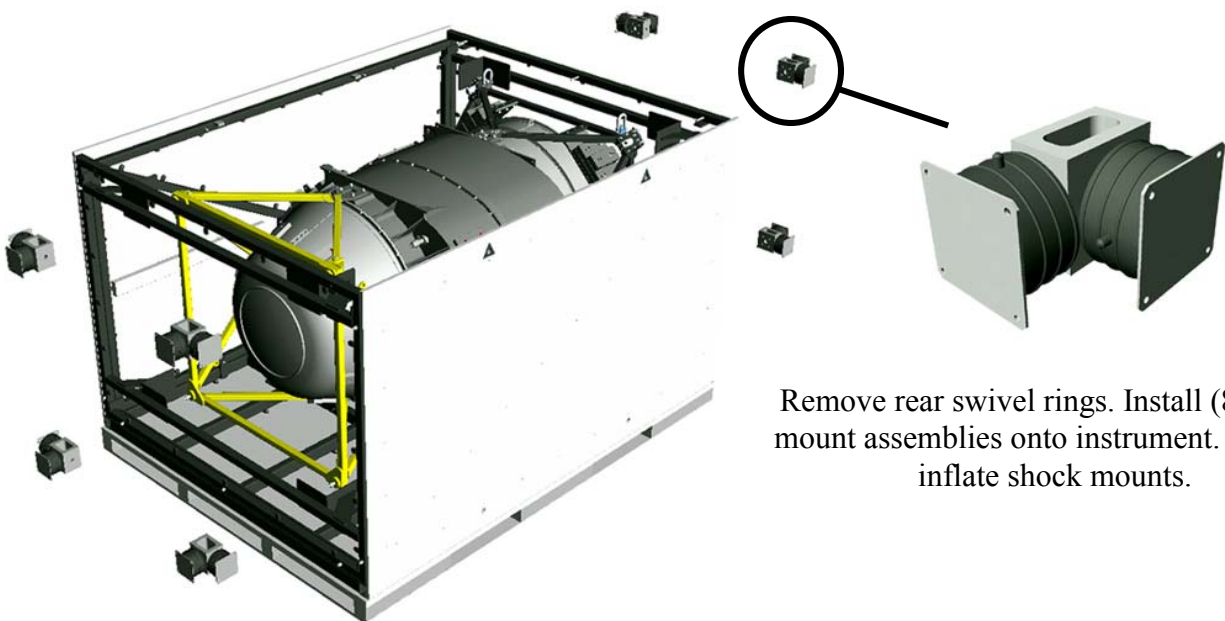
Inflate (4) shock mounts located on “feet” of instrument to 60 PSI after instrument is lowered onto shock mounts.

**Caution:** Damage will occur to shock mounts if inflated when no load is applied.

Maximum Pressure not to exceed 80 PSI.



## 9.2.5 SHOCK MOUNT INSTALLATION



Remove rear swivel rings. Install (8) shock mount assemblies onto instrument. **Do not** inflate shock mounts.

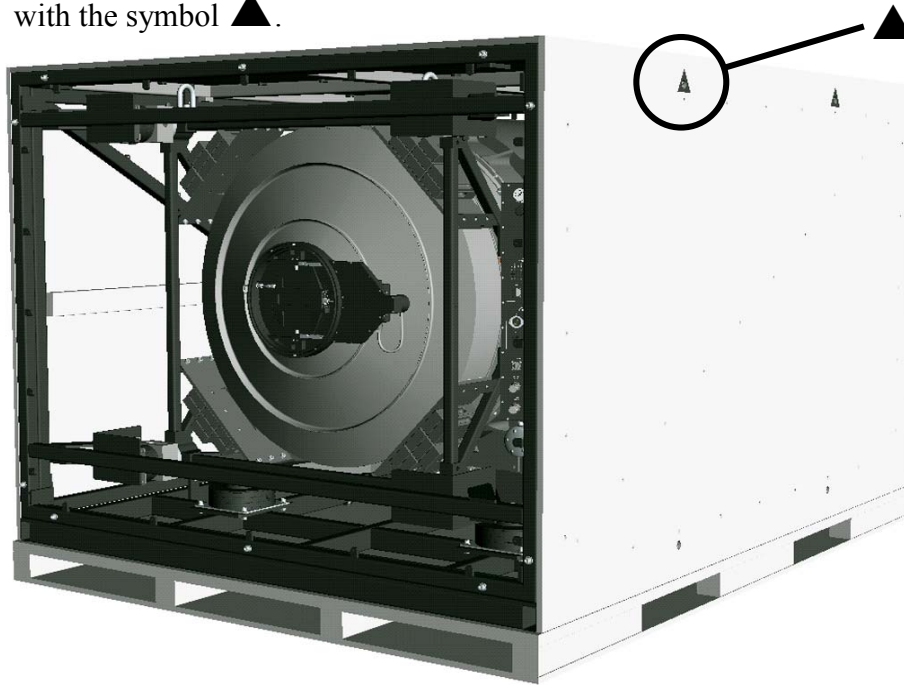
## 9.2.6 TOP PANEL INSTALLATION

Lower Top Panel Assembly onto container.

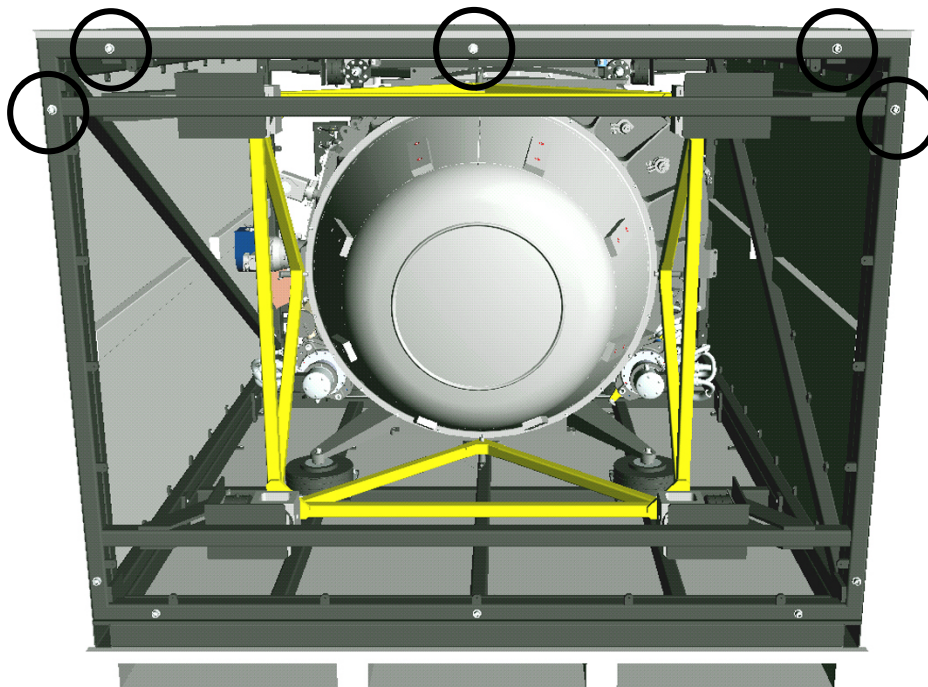


## 9.2.6 TOP PANEL INSTALLATION (CONTINUED)

Install (2) M10 Socket Head Cap Screws on 2 Side Panels designated with the symbol ▲.

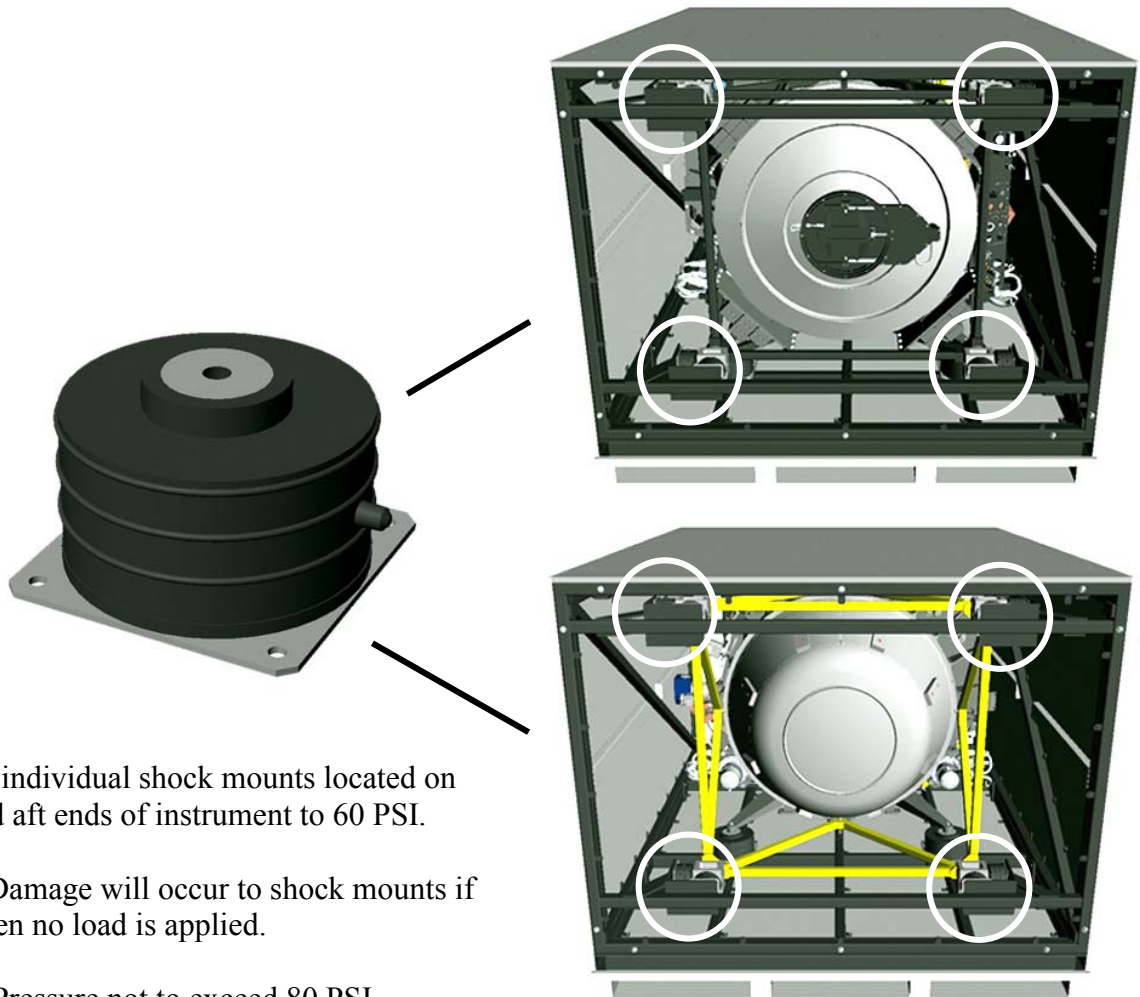


Install (5) M12x120 Long Socket Head Cap Screws on 2 End Panel Frames.





### 9.2.7 SHOCK MOUNT INFLATION



Inflate (16) individual shock mounts located on forward and aft ends of instrument to 60 PSI.

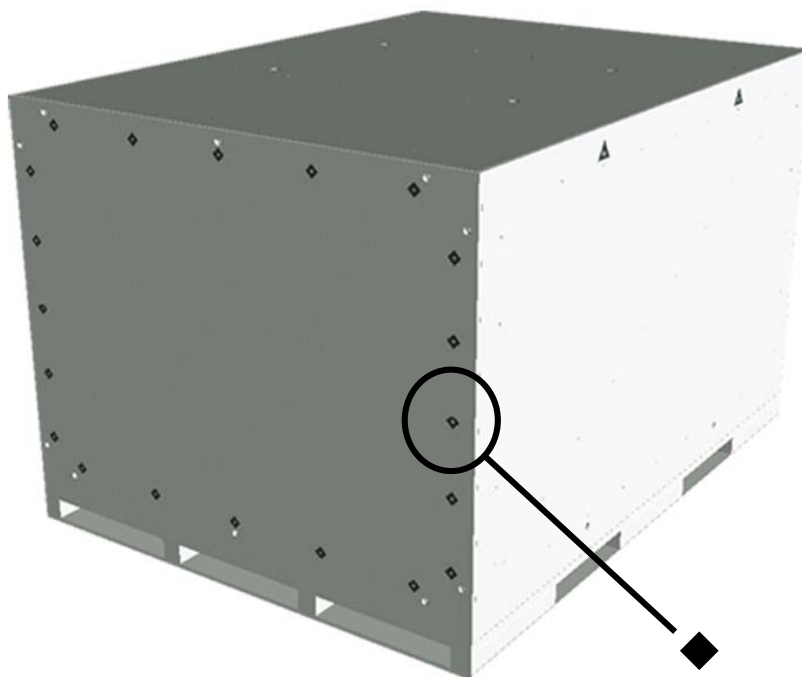
**Caution:** Damage will occur to shock mounts if inflated when no load is applied.

Maximum Pressure not to exceed 80 PSI.

## 9.2.8 END PANEL INSTALLATION



Install 2 Plywood End Panels.



Install (20) M6 Flat Head Socket Screws on 2  
end panels designated with the symbol:

