

8.5 Mechanism Removal & Installation

8.5.1 On Instrument Wave Front Sensor Bench

1. Description

This section describes the procedures to remove the On Instrument Wave Front Sensor (OIWFS) bench from the Main Optical Bench. This procedure must be conducted in a Class 10,000 clean room environment.

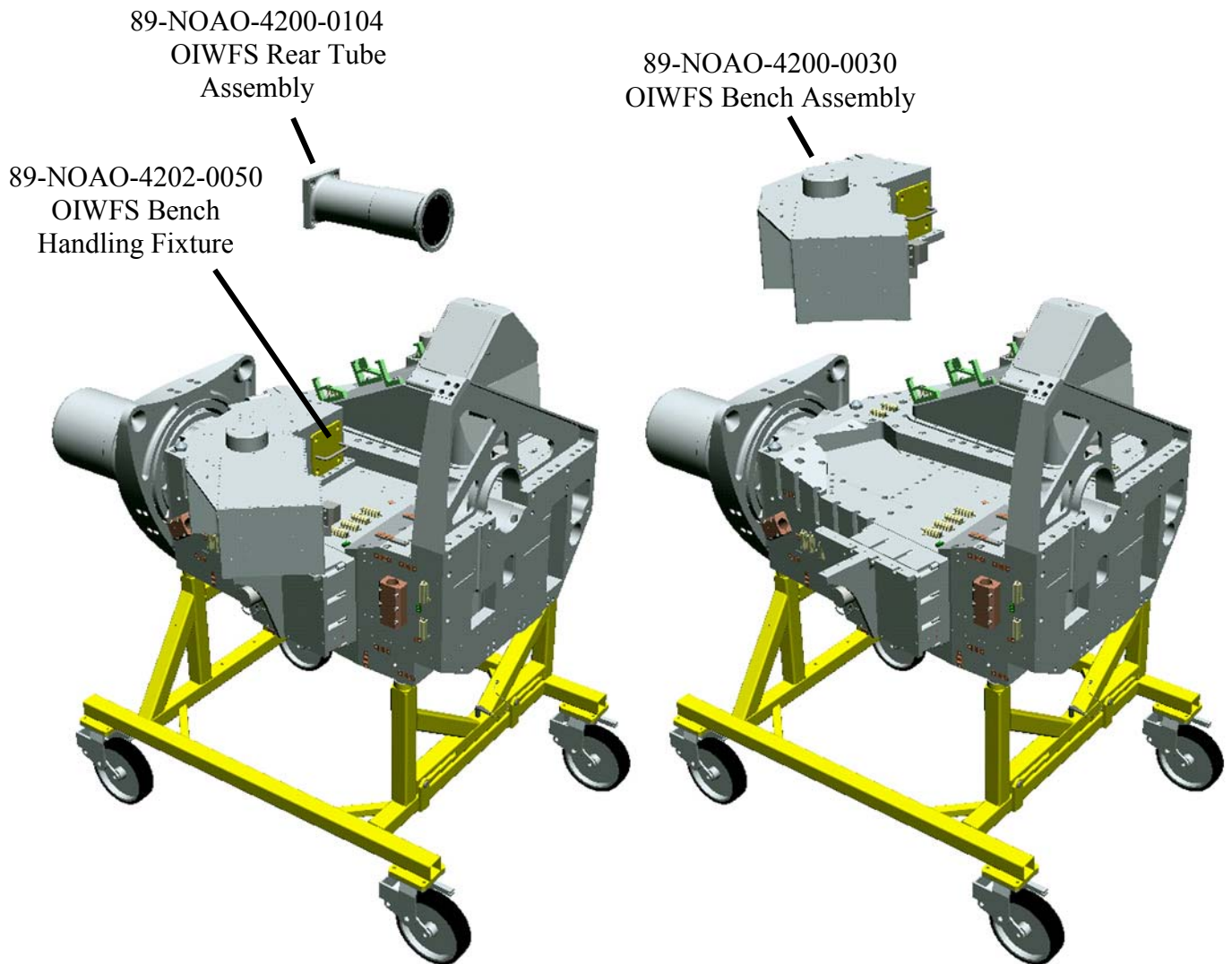


Figure 8.5.1.1. OIWFS Bench removal. Note: LN₂ Pre-Cool Assembly not shown for clarity.

2. Nomenclature

89-NOAO-4200-0030	OIWFS Bench Assembly
89-NOAO-4200-0104	OIWFS Rear Tube Assembly
89-NOAO-4202-0050	OIWFS Bench Handling Fixture

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Heavy components: Do not attempt to lift components manually. Use proper lifting equipment.

Item	Weight
OIWFS Bench Assembly	89 Lbs (40 Kg)

Fragile optical components: Use extreme caution when handling components.

4. Special Tools / Fixtures

Crane
Lifting Strap
89-NOAO-4202-0050 OIWFS Bench Handling Fixture

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 2.

6. Procedures

- A. Remove 89-NOAO-4200-0104 OIWFS Rear Tube Assembly.
- B. Install 89-NOAO-4202-0050 OIWFS Bench Handling Fixture onto 89-NOAO-4200-0030 OIWFS Bench Assembly.
- C. Disconnect TD39, TD33, and P400 electrical connectors on 89-NOAO-4200-0030 OIWFS Bench Assembly. Note that the other connectors and harnesses remain with the OIWFS.
- D. Remove the copper cable clamp that retains the 745-P5 and 745-P8 ribbon cables on the main optical bench.
- E. Remove all fasteners that attach OIWFS Bench Assembly to main bench.
- F. Remove top halves of LN₂ Pre-cool clamp blocks on OIWFS Bench Assembly.
- G. Remove 89-NOAO-4200-0030 OIWFS Bench Assembly.
- H. Ground the 89-NOAO-4200-0030 OIWFS Bench Assembly.

7. Special Reassembly Procedures

- A. Follow removal procedures in reverse order.

8. Summary

This section outlined the procedures to remove the On Instrument Wave Front Sensor (OIWFS) bench from the Main Optical Bench.. This procedure is conducted in a Class 10,000 clean room. This task completes the instrument structure removal procedures. After completion of this task, proceed to Section 8.5.2 to continue with mechanism removal procedures.

8.5.2 Collimator Mirror Assembly

1. Description

This section describes the procedures to remove the Collimator Mirror Assembly from the Main Optical Bench. Note: This procedure can be conducted with Main Optical Bench in either orientation as defined in Section 8.4.10. This procedure must be conducted in a Class 10,000 clean room environment.

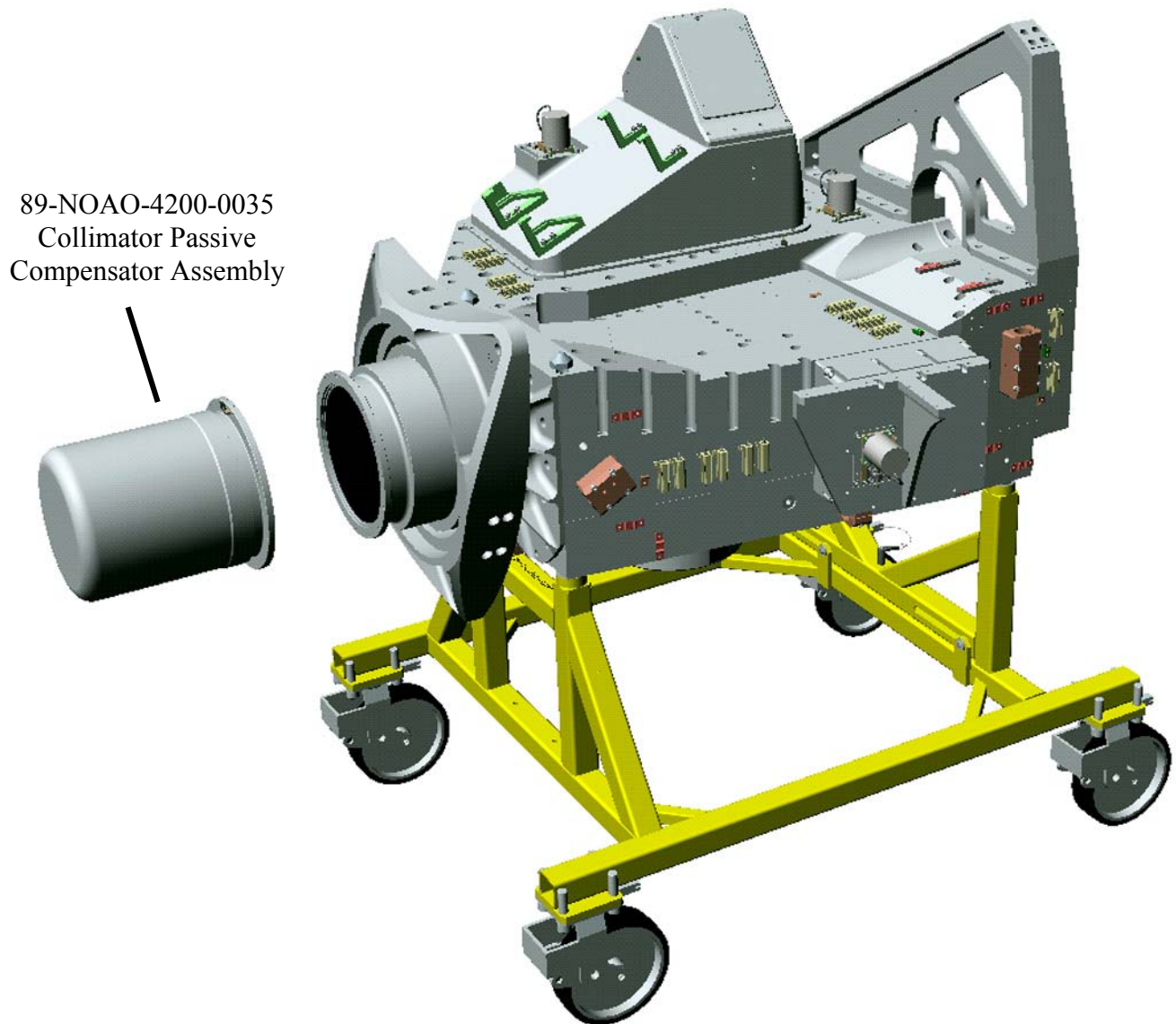


Figure 8.5.2.1. Remove Collimator Passive Compensator Assembly.

2. Nomenclature

89-NOAO-4200-0035 Collimator Passive Compensator Assembly
89-NOAO-4200-0057 Optical Bench Gimbal Mount Assembly

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

4. Special Tools / Fixtures

No special tools or fixtures required.

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1. The recommended number of persons is 2.

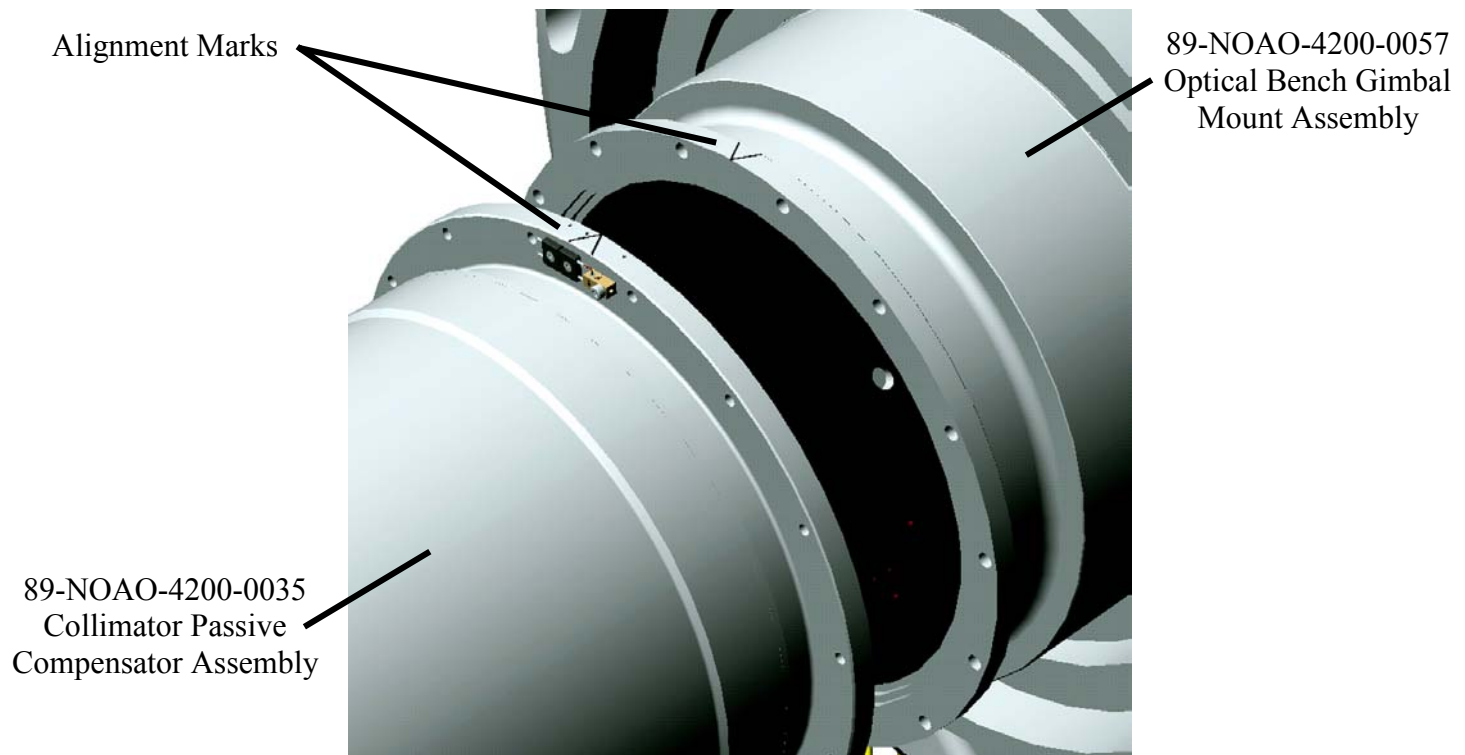


Figure 8.5.2.2. At re-installation, align alignment marks on flanges of Collimator Passive Compensator Assembly & Optical Bench Gimbal Mount Assembly to ensure proper alignment of Collimator Mirror.

6. Procedures

- A. If temperature sensor TD30 is not disconnected already, disconnect temperature sensor TD30 connector from 89-NOAO-4200-0035 Collimator Passive Compensator Assembly.
- B. Remove 89-NOAO-4200-0035 Collimator Passive Compensator Assembly.

7. Special Reassembly Procedures

At re-installation, align alignment marks on flanges of Collimator Passive Compensator Assembly & Optical Bench Gimbal Mount Assembly to ensure proper alignment of Collimator Mirror. See Figure 8.5.2.2.

8. Summary

This section outlined the procedures to remove the Collimator Mirror Assembly from the Main Optical Bench. This procedure is conducted in a Class 10,000 clean room.

This task completes the instrument structure removal procedures. After completion of this task, proceed to Section 8.5.3 to continue with mechanism removal procedures.

8.5.3 Long Camera Fold Mirror Mount

1. Description

This section describes the procedures to remove the Long Camera Fold Mirror Mount from the Main Optical bench. This procedure must be conducted in a Class 10,000 clean room environment.

89-NOAO-4200-0093
Long Camera Fold
Mirror Mount



Figure 8.5.3.1. Long Camera Fold Mirror Mount Removal.

2. Nomenclature

89-NOAO-4200-0093 Long Camera Fold Mirror Mount

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

4. Special Tools / Fixtures

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1. The recommended number to complete this task is 2.

6. Procedures

- A. Disconnect electrical connectors P19LS and P19M from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.
- B. Remove Home Switch cover from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.
- C. Disconnect electrical connectors for Home Switch.
- D. Remove Home Switch and Camera Brake assembly from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.
- E. Remove fasteners from Long Camera Fold Mirror Mount. 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.
- F. Lift Long Camera Fold Mirror Mount from Main Optical Bench.

7. Special Reassembly Procedures

- A. Follow removal procedures in reverse order.
- B. Ensure that Home Switch and Camera Brake Assembly are removed prior to reinstallation of 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.

8. Summary

This section outlined the procedures to remove the Long Camera Fold Mirror Mount from the Main Optical bench. This procedure is conducted in a Class 10,000 clean room.

This task completes the instrument structure removal procedures. After completion of this task, proceed to Section 8.5.4 to continue with mechanism removal procedures.

8.5.4 Inverting Main Optical Bench

1. Description

This section describes the procedures to invert the Main Optical bench to allow access to the acquisition mirror, camera turret, prism turret, and grating turret. This procedure must be conducted in a Class 10,000 clean room environment.

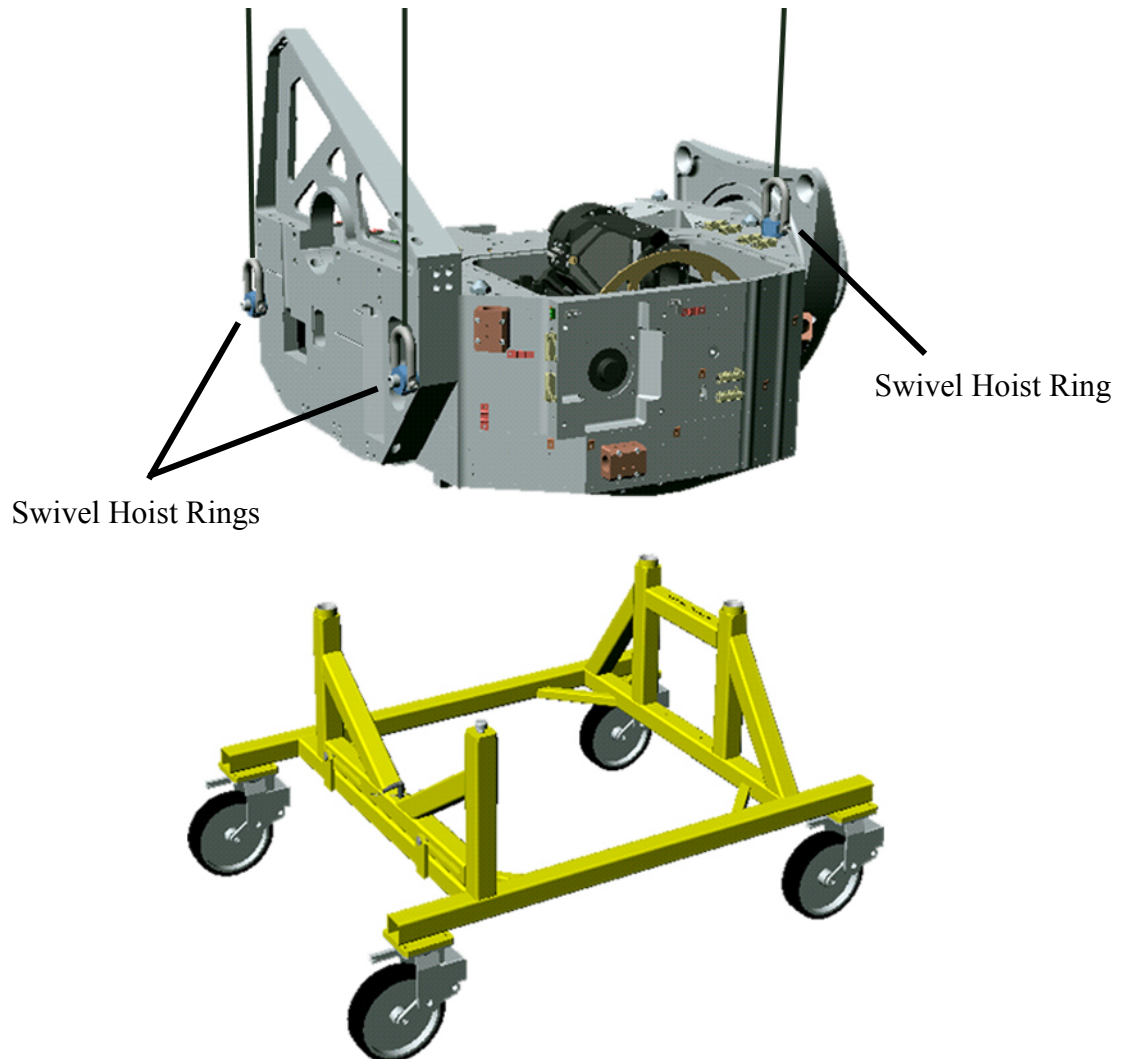


Figure 8.5.4.1. Attach Swivel Hoist Rings (3) and lifting straps. Lift optical bench from handling cart.

2. Nomenclature

Swivel Hoist Ring

Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.



Figure 8.5.4.2. (Left) Rotate Main Optical Bench by lowering aft end until vertical and disconnect lower strap, (Right) reconnect strap to other side and lift aft end until Main Optical Bench is horizontal.

3. Special Tools / Fixtures

Lifting Straps
Crane

4. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 2. The recommended number to complete this task is 2.

5. Procedures

- A) Attach four Swivel Hoist Rings onto the Main Optical Bench at the locations shown in Figure 8.5.4.1.
- B) Attach a 6 ft. lifting strap to the forward (slit) end of Main Optical Bench by threading it through both forward Swivel Hoist Rings.
- C) Attach the aft lift hook to the top facing Swivel Hoist Ring on the aft end of the bench.
- D) Attach the forward lift hook to both ends of the 6ft lifting strap attached in step B.
- E) Lift Main Optical Bench slowly until vertical.

- F) Move handling cart away and lower forward end of the Main Optical Bench until vertical.
- G) Disconnect lifting hook from the strap on the lower forward (slit) end and reconnect it the Upper aft (collimator) Swivel Hoist Ring on the opposite side of the Main Optical Bench.
- H) Transfer the load of the bench from the original upper aft lift point to the one that was just connected in step G.
- I) Lower the original lift hook from the upper aft end and disconnect it.
- J) Connect the lift hook that was disconnected in step I to the strap on the lower forward (slit) end.
- K) Lift Forward end of Main Optical Bench until horizontal.
- L) Slide adjustable frame on handling cart to opposite side to enable cart to align with conical hard points on Main Optical Bench.
- M) Adjust the height of the brass foot on the corner of the handling cart to accommodate the height of the bench depending upon which side is facing up.
- N) Slowly lower Main Optical Bench onto cart. Ensure cart aligns with conical hard points on Main Optical Bench as it is being lowered.
- O) Disconnect the hooks from the strap and lifting rings.



Figure 8.5.4.3. Lower Optical bench onto handling cart. Slide adjustable frame on handling cart to opposite side to enable cart to align with conical hard points on Main Optical Bench.

6. Special Reassembly Procedures

A. Follow procedures in reverse order as necessary to access desired components.

7. Summary

This section outlined the procedures to invert the Main Optical bench to allow access to the acquisition mirror, camera turret, prism turret, and grating turret. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.5. to continue with mechanism removal procedures.

8.5.5 Acquisition Mirror

1. Description

This section describes the procedures to remove the Acquisition Mirror Assembly from the Main Optical Bench. This procedure must be conducted in a Class 10,000 clean room environment.

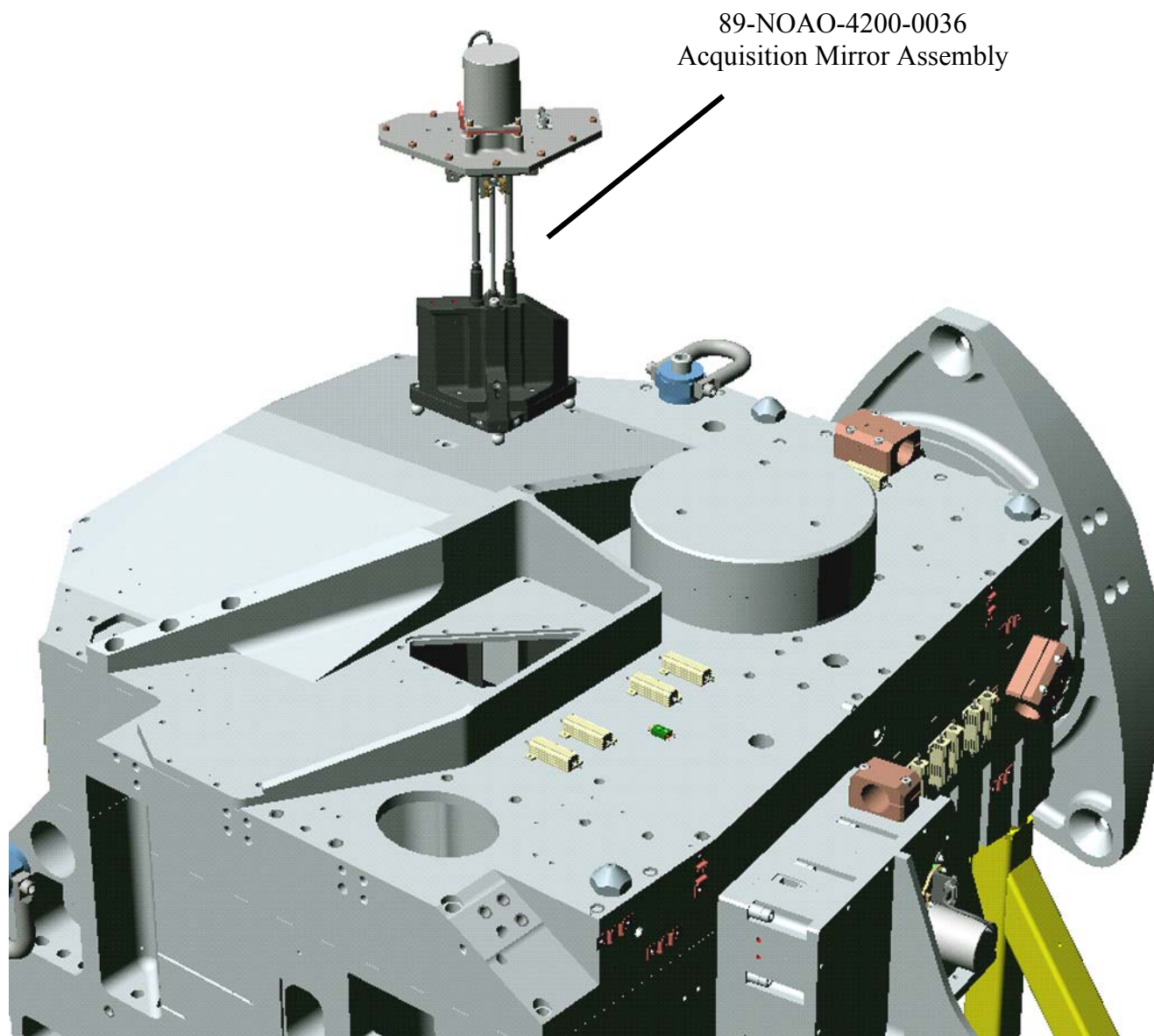


Figure 8.5.5.1. Acquisition Mirror removal

2. Nomenclature

89-NOAO-4200-0036 Acquisition Mirror Assembly
89-NOAO-4202-0054 Acquisition Mirror Protective Cover

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

Exposed mirror surface: Use extreme caution when handling components.

4. Special Tools / Fixtures

89-NOAO-4202-0054 Acquisition Mirror Protective Cover
89-NOAO-4203-0060 Acquisition Mirror Storage Fixture

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1.

6. Procedures

- A. Disconnect P13LS and P13M electrical connectors from Acquisition Mirror Assembly.
- B. Loosen but do not remove captive screws on Acquisition Mirror Assembly.
- C. Carefully lift Acquisition Mirror Assembly out of Main Optical Bench. Use extreme caution not to contact mirror surface with adjacent components when removing.
- D. Install Acquisition Mirror Assembly into storage fixture.
- E. Place 89-NOAO-4202-0054 Acquisition Mirror Protective Cover over Acquisition Mirror Assembly.

7. Special Reassembly Procedures

- A. Follow removal procedures in reverse order.

8. Summary

This section outlined the procedures to remove the Acquisition Mirror Assembly from the Main Optical Bench. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.6 to continue with mechanism removal procedures.

8.5.6 Camera Turret

1. Description

This section describes the procedures to remove the Camera Turret Assembly from the Main Optical bench. This procedure must be conducted in a Class 10,000 clean room environment.

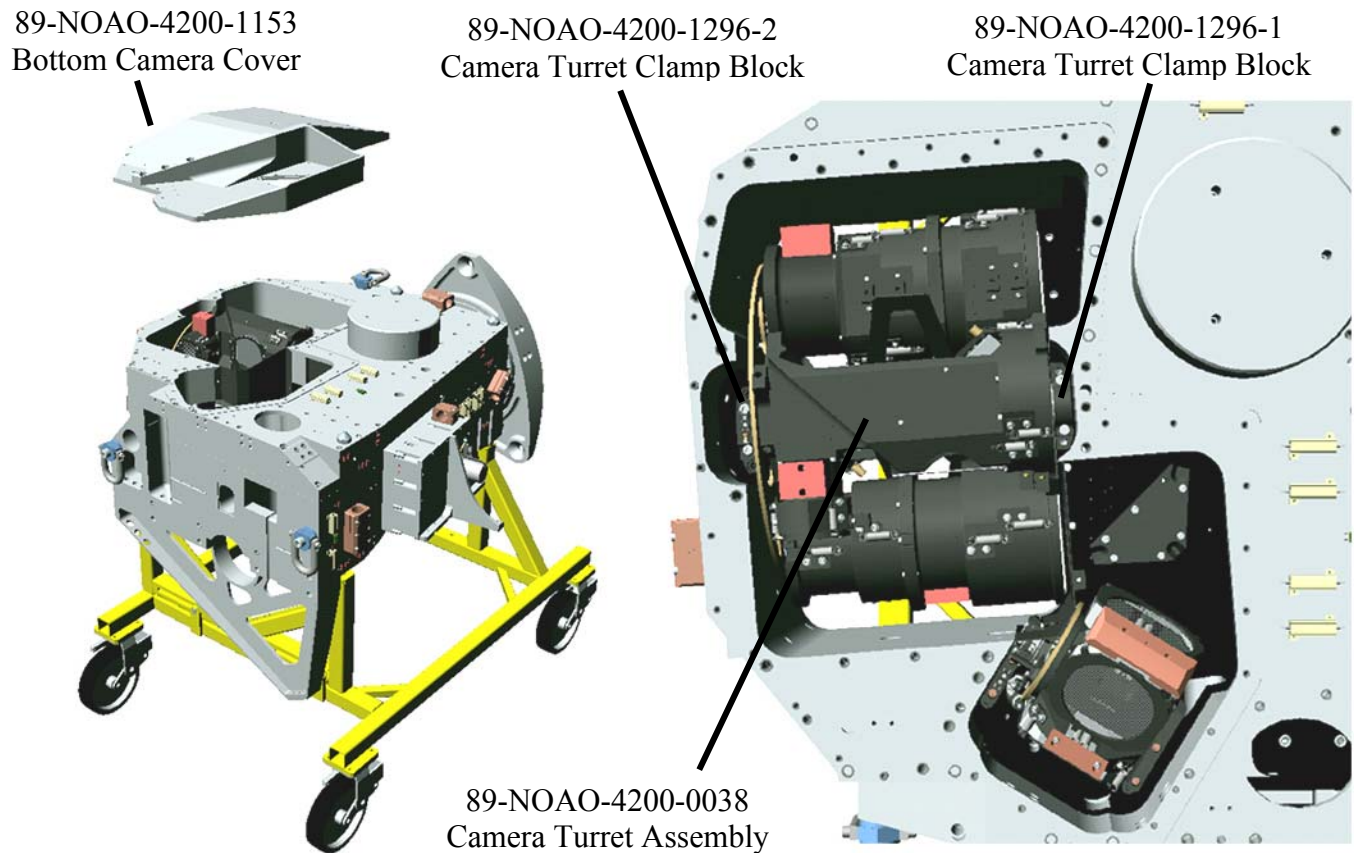


Figure 8.5.6.1. (Left) Remove Bottom Camera Cover. (Right) Remove 89-NOAO-4200-1296-1,-2 Camera Turret Clamp Blocks. Caution: Do not remove 89-NOAO-4200-1324-1,-2 Camera Turret Mount Blocks. Mount Blocks define alignment of camera turret and removal will result in loss of camera alignment.

2. Nomenclature

89-NOAO-4200-1153	Bottom Camera Cover
89-NOAO-4200-0038	Camera Turret Assembly
89-NOAO-4200-1296-1	Camera Turret Clamp Block
89-NOAO-4200-1296-2	Camera Turret Clamp Block
89-NOAO-42xx-xxxx	Camera Turret Storage Fixture

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

Heavy components: Do not attempt to lift components manually. Use proper lifting equipment.

Item

Camera Turret Assembly

Weight

117 Lbs (53 Kg)



Figure 8.5.6.2. Attach lift strap to lifting bracket on 89-NOAO-4200-0038 Camera Turret Assembly and carefully lift Camera Turret Assembly out of Main Optical Bench.

4. Special Tools / Fixtures

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 2. The recommended number to complete this task is 2.

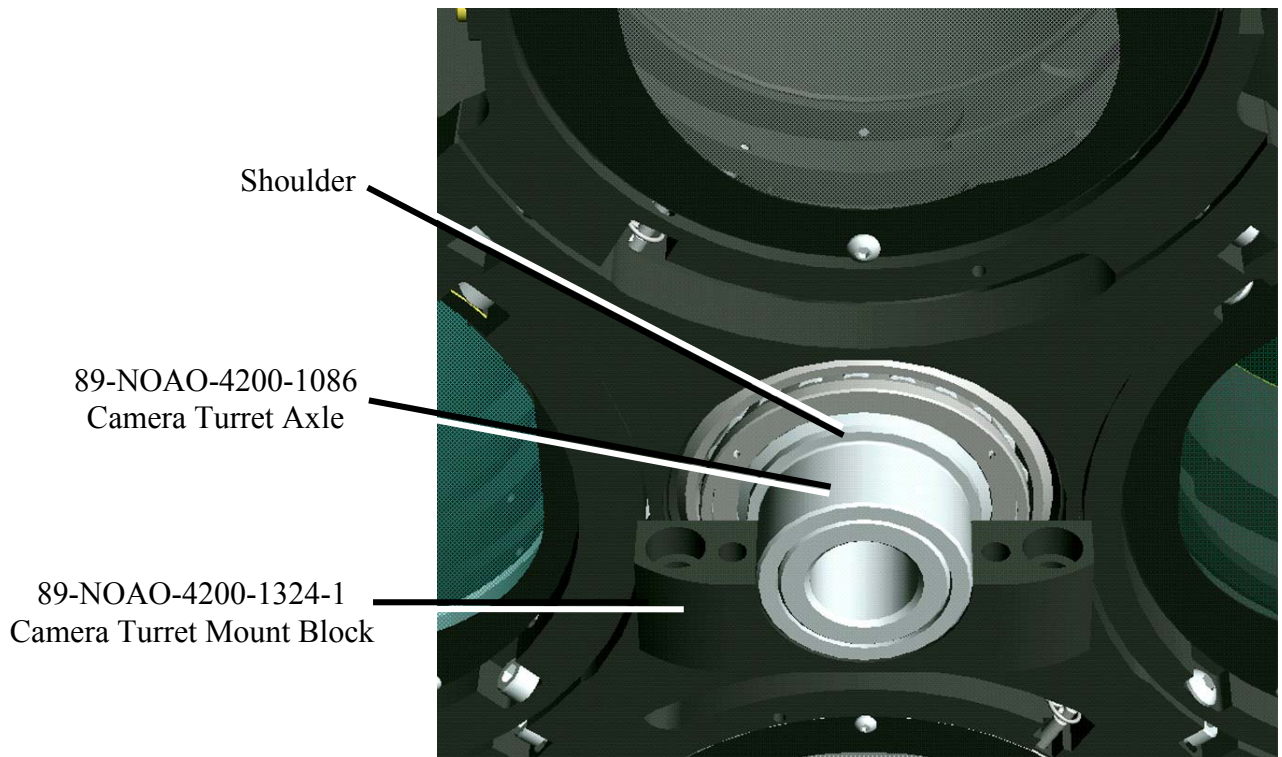


Figure 8.5.6.3. At installation, ensure that shoulder on Camera Turret Axle seats against Camera Turret Mount Block.

6. Procedures

- A. Omit step B if the Long Camera Fold Mirror Mount is not installed.
- B. Disconnect electrical connectors P19LS and P19M from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount, remove home switch cover from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount, disconnect electrical connectors for home switch and remove Home Switch and Camera Brake assembly from 89-NOAO-4200-0093 Long Camera Fold Mirror Mount.
- C. Remove Acquisition Mirror wiring harness from 89-NOAO-4200-1153 Bottom Camera Cover.
- D. Remove fasteners that attach 89-NOAO-4200-1153 Bottom Camera Cover to Main Optical Bench.
- E. Install (2) jackscrews into 89-NOAO-4200-1153 Bottom Camera Cover jack screw holes and lift Bottom Camera Cover from Main Optical bench with jack screws.
- F. Remove 89-NOAO-4200-1153 Bottom Camera Cover.
- G. Remove jackscrews from Bottom Camera Cover.
- H. Disconnect temperature sensor connector on 89-NOAO-4200-1296-2 Camera Turret Clamp Block.
- I. Remove 89-NOAO-4200-1296-1, -2 Camera Turret Clamp Blocks
- J. **Caution: Do not remove 89-NOAO-4200-1324-1,-2 Camera Turret Mount Blocks (2).** The Mount Blocks define alignment of camera turret. Removal of these blocks will result in loss of camera alignment.
- K. Loop lifting strap around lifting bracket on 89-NOAO-4200-0038 Camera Turret Assembly and attach to crane.
- L. Slowly Lift Camera Turret Assembly out of Main Optical Bench.

7. **Special Reassembly Procedures**

- A. When re-installing Camera Turret Assembly into Main Optical Bench, ensure that shoulder on Camera Turret Axle seats against Camera Turret Mount Block. See figure 8.5.6.3.
- B. Ensure that Home Switch and Camera Brake Assembly in 89-NOAO-4200-0093 Long Camera Fold Mirror Mount are removed prior to reinstallation of Camera Turret Assembly.

8. **Summary**

This section outlined the procedures to remove the Camera Turret Assembly from the Main Optical bench. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.7. to continue with mechanism removal procedures.

Additional procedures required:

- Assembly of Camera Turret Storage Fixture 89-NOAO-42xx-xxxx
- Installation of Camera Turret into Storage Fixture after removal from bench
- Removal of individual cameras

8.5.7 Prism Turret

1. Description

This section describes the procedures to remove the Prism Turret Assembly from the Main Optical bench. This procedure must be conducted in a Class 10,000 clean room environment.

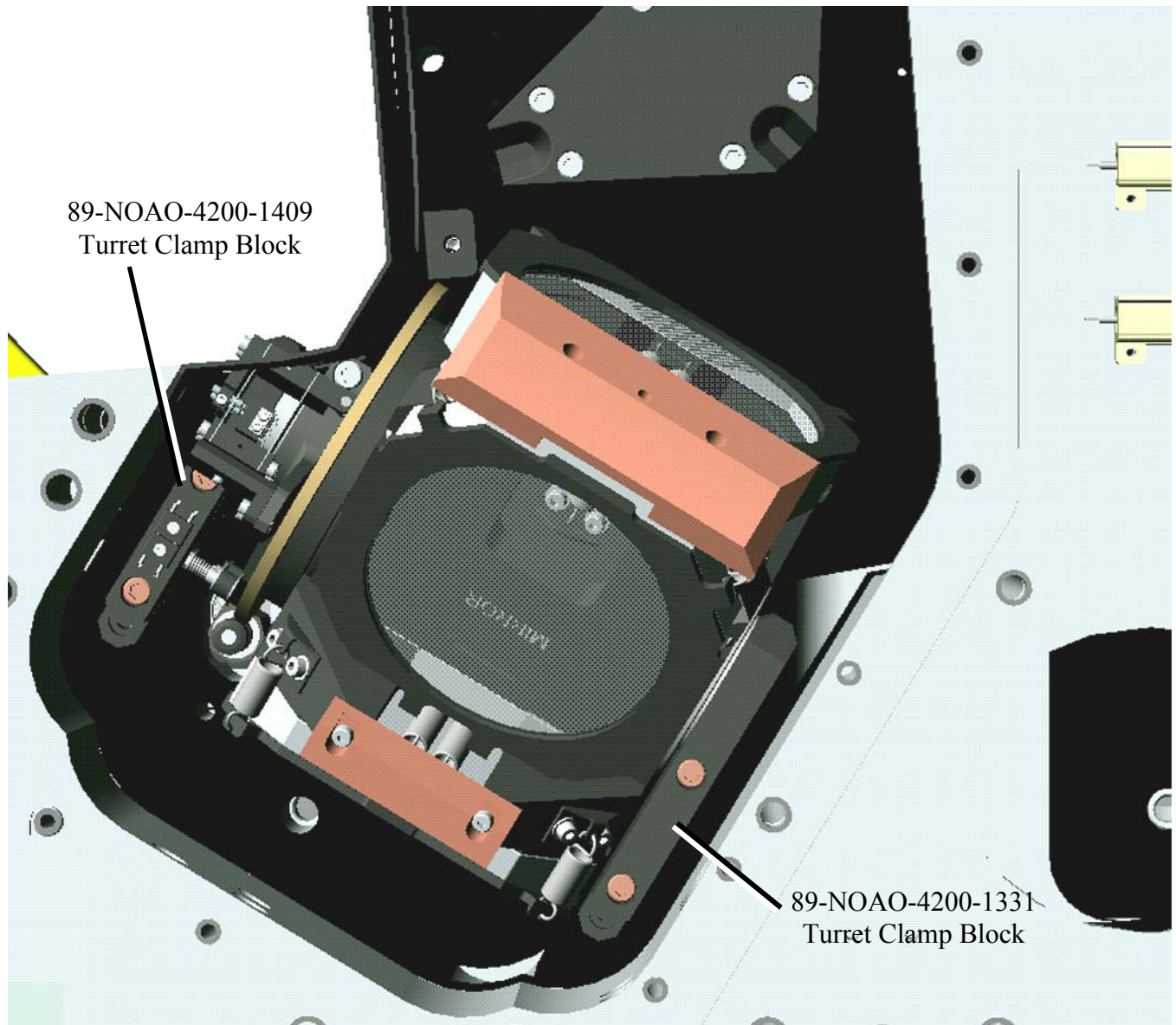


Figure 8.5.7.1. Remove 89-NOAO-4200-1331, -1409 Turret Clamp Blocks. **Caution: Do not remove 89-NOAO-4200-1407, -1408 Turret Mount Blocks.** Turret Mount Blocks define Prism Turret alignment and removal of Turret Mount Blocks will result in loss of Prism Turret alignment.

2. Nomenclature

89-NOAO-4200-0033 Prism Turret Assembly

89-NOAO-4200-1331
89-NOAO-4200-1409
M6 Eyebolt

Turret Clamp Block, Large Bore
Turret Clamp Block, Small Bore

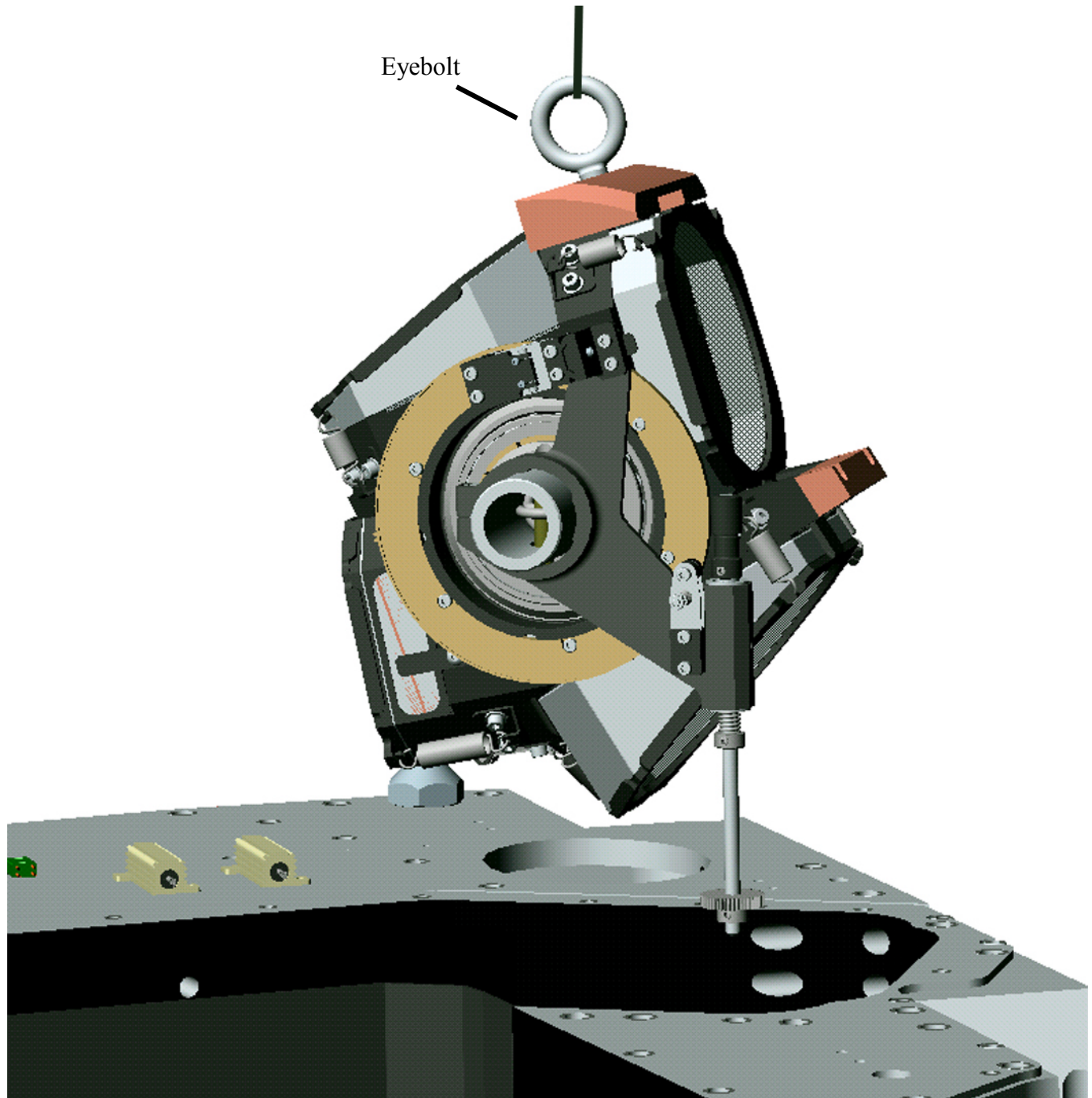


Figure 8.5.7.2. Install eyebolt and lift strap. Lift 89-NOAO-4200-0033 Prism Turret Assembly out of Main Optical Bench.

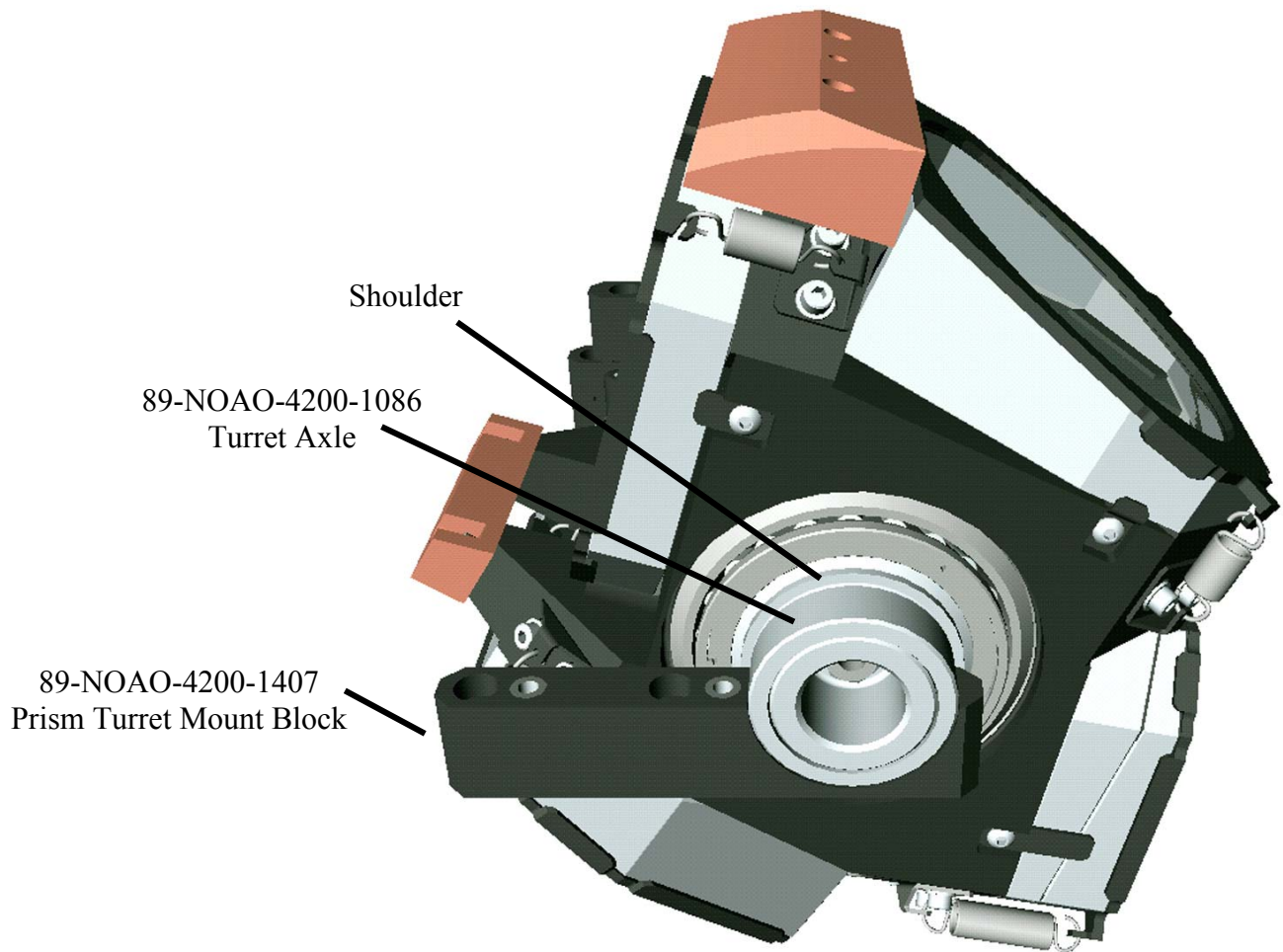


Figure 8.5.7.3. At installation, ensure that shoulder on Prism Turret Axle seats against Prism Turret Mount Block.

3. **Safety Precautions**

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

Heavy components: Do not attempt to lift components manually. Use proper lifting equipment.

Item	Weight
Prism Turret Assembly	35 Lbs (16 Kg)

4. **Special Tools / Fixtures**

Prism Turret Storage Fixture

5. **Personnel Recommended/Required To Complete Task**

The required number of personnel to complete this task is 2. The recommended number to complete this task is 2.

6. Procedures

- A. Disconnect P15M from the Prism Turret motor. Remove the 3:1 motor drive assembly.
- B. Manually rotate Prism Turret by reaching beneath Main Optical Bench and through motor mount opening, turn the input shaft until the large counterweight with the 6mm screw hole is facing up.
- C. Install eye-bolt in M6 threaded hole in counterweight.
- D. Attach lifting strap to eyebolt.
- E. Disconnect connector P15aLS on 89-NOAO-4200-1409 Turret Clamp Block.
- F. Remove 89-NOAO-4200-1331, 1409 Turret Clamp Blocks.
- G. Carefully lift Prism Turret out of Main Optical Bench.
- H. Place Prism Turret into storage fixture 89-NOAO-4203-0055.

7. Special Reassembly Procedures

- A. When re-installing Prism Turret Assembly into Main Optical Bench, ensure that shoulder on Prism Turret Axle seats on Prism Turret Mount Block. See Figure 8.5.7.3.

8. Summary

This section outlined the procedures to remove the Prism Turret Assembly from the Main Optical bench. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.8 to continue with mechanism removal procedures.

8.5.8 Grating Turret

1. Description

This section describes the procedures to remove the Grating Turret Assembly from the Main Optical bench. This procedure must be conducted in a Class 10,000 clean room environment.

89-NOAO-4203-1156
Lower Angle Bracket

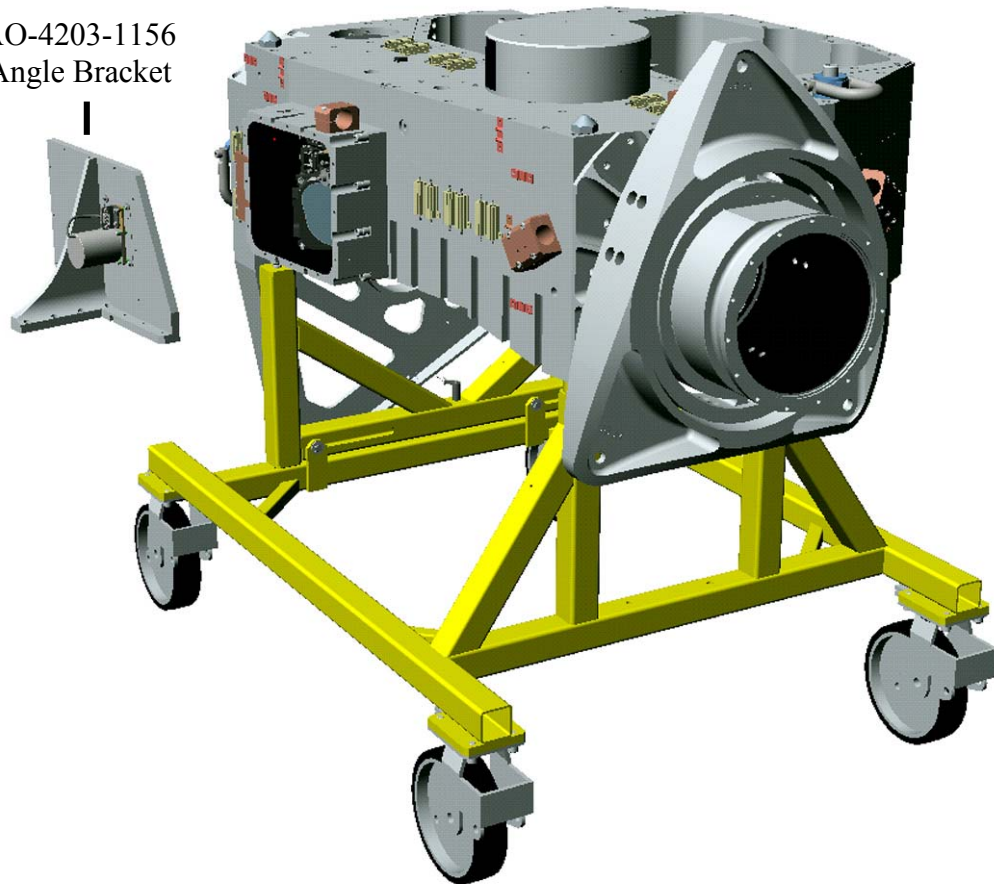


Figure 8.5.8.1. Remove 89-NOAO-4200-1156 Lower Angle Bracket with 3:1 Motor Drive.

2. Nomenclature

89-NOAO-4200-1156	Lower Angle Bracket
89-NOAO-4200-0100	3:1 Motor Drive Assembly
89-NOAO-4200-0034	Grating Turret Assembly
89-NOAO-4202-0048	Grating Turret Installation Fixture
89-NOAO-4200-1331	Turret Clamp Block, Large Bore
89-NOAO-4200-1409	Turret Clamp Block, Small Bore

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components. Use of face mask recommended once grating surfaces are exposed.

Item

Grating Turret Assembly

Weight

15.0 lbs (6.8 Kg)

4. Special Tools / Fixtures

89-NOAO-4202-0048 Grating Turret Installation Fixture
89-NOAO-4203-0054 Grating Turret Storage Fixture

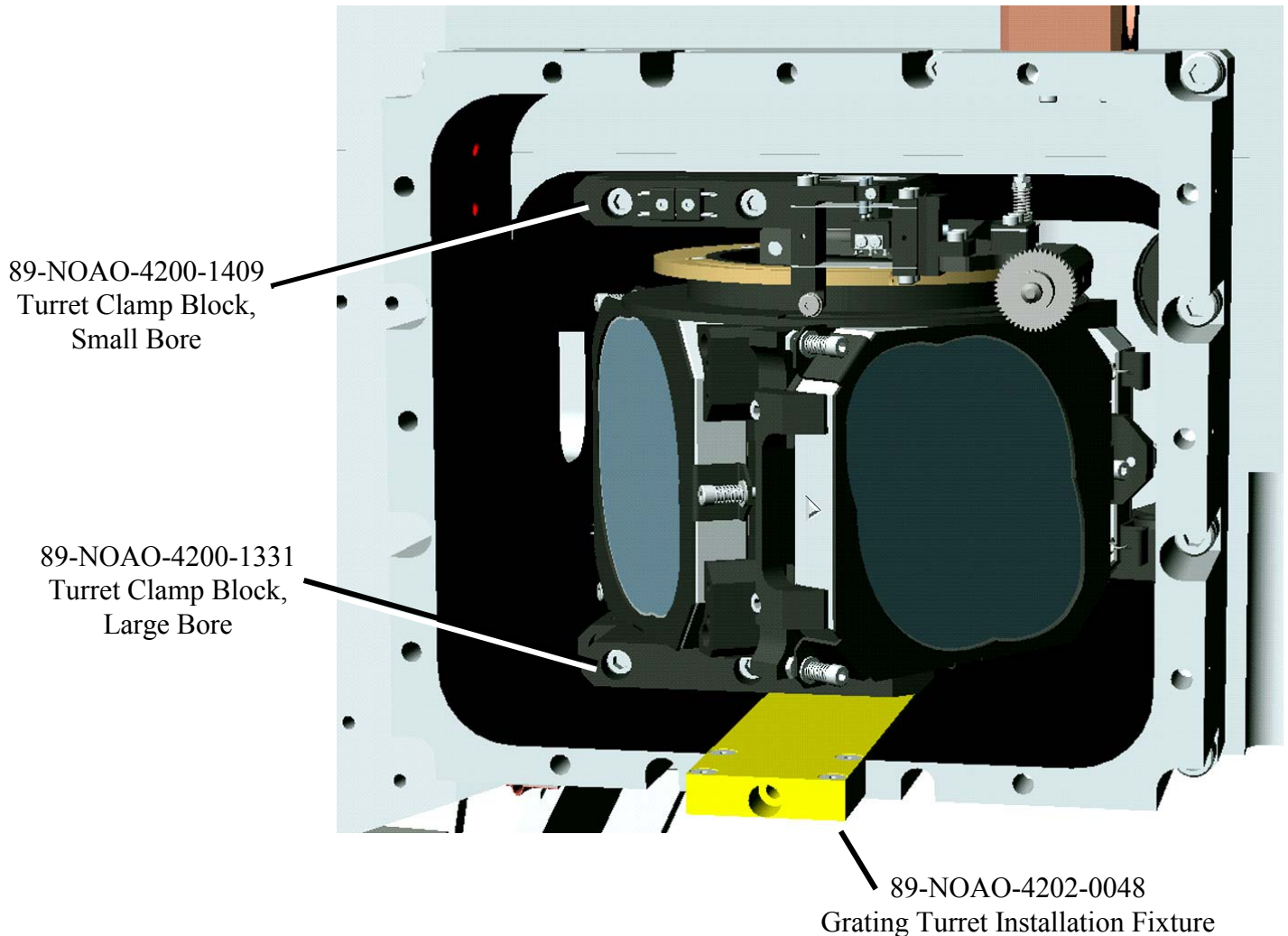
5. Special Tools / Fixtures

Figure 8.5.8.2. Install 89-NOAO-4202-0048 Grating Turret Installation Fixture. Remove 89-NOAO-4200-1331, -1409 Turret Clamp Blocks. **Caution: Do not remove 89-NOAO-4200-1407, -1408 Turret Mount Blocks.** Turret Mount Blocks define Grating Turret alignment and removal of Turret Mount Blocks will result in loss of Grating Turret alignment.

6. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1. The recommended number to complete this task is 2.

7. Procedures

- A. Disconnect Motor connector on 89-NOAO-4200-0100 3:1 Motor Drive Assembly.
- B. Remove 89-NOAO-4200-1156 Lower Angle Bracket with 89-NOAO-4200-0100 3:1 Motor Drive Assembly attached. See Figure 8.5.8.1.
- C. Install 89-NOAO-4202-0048 Grating Turret Installation Fixture. See Figure 8.5.8.2.
- D. Disconnect temperature sensor connector on 89-NOAO-4200-1409 Turret Clamp Block.
- E. Remove 89-NOAO-4200-1331, -1409 Turret Clamp Blocks. **Caution: Do not remove 89-NOAO-4200-1407, -1408 Turret Mount Blocks.** Turret Mount Blocks define Grating Turret alignment and removal of Turret Mount Blocks will result in loss of Grating Turret alignment.
- F. Carefully slide Grating Turret out of Main Optical Bench holding Grating Turret by the axle. See Figure 8.5.8.3.
- G. Place Grating Turret into storage fixture.

8. Special Reassembly Procedures

- A. When re-installing Grating Turret Assembly into Main Optical Bench, ensure that shoulder on Prism Turret Axle seats on Grating Turret Mount Block. See Figure 8.5.8.4.
- B. Use 89-NOAO-4202-1123 Grating Drive Shaft Setup Tool to properly align Grating Turret Drive shaft with 89-NOAO-4200-0100 3:1 Motor Drive Assembly. Ensure that Drive Shaft operates freely. Adjust alignment of drive shaft with 3:1 Motor Drive Assembly as necessary by loosening fasteners on clamp blocks and retightening after adjustment is made.

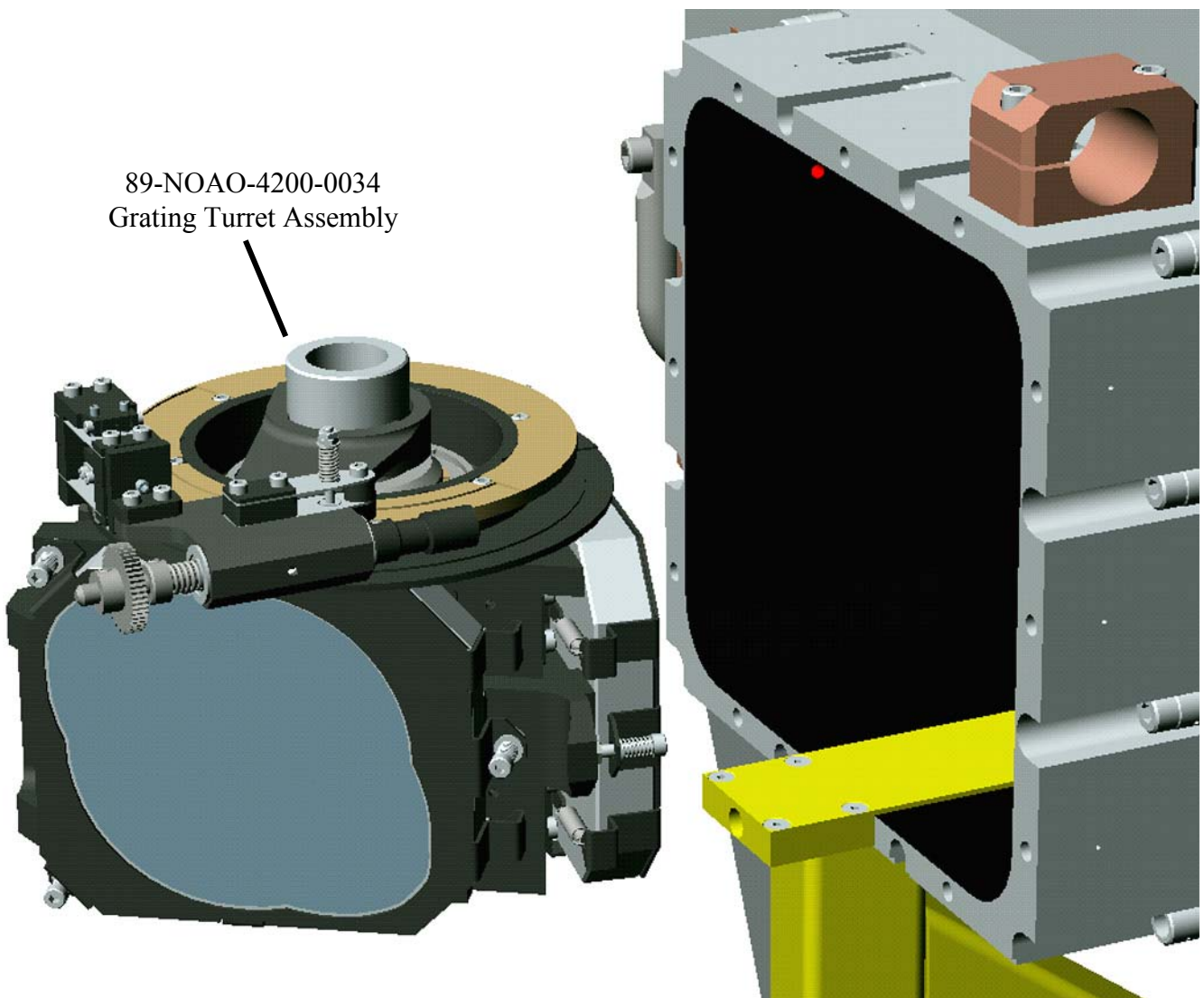


Figure 8.5.8.3. Remove 89-NOAO-4200-0034 Grating Turret Assembly.

9. Summary

This section outlined the procedures to remove the Grating Turret Assembly from the Main Optical bench. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.9 to continue with mechanism removal procedures.

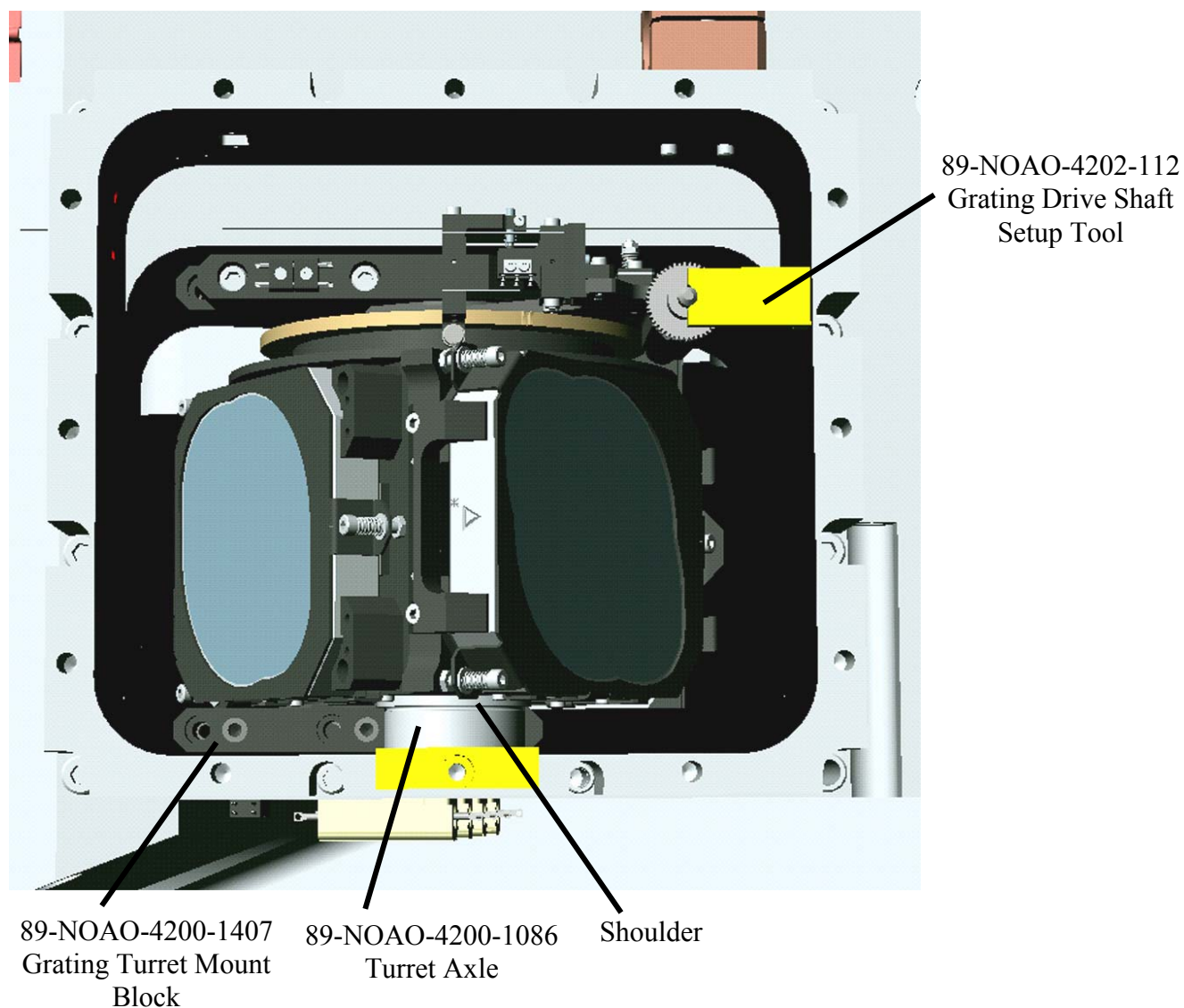


Figure 8.5.8.4. At installation, ensure that shoulder on Grating Turret Axle seats against Grating Turret Mount Block. Use 89-NOAO-4202-1123 Grating Drive Shaft Setup Tool to properly align Grating Turret Drive shaft with 89-NOAO-4200-0100 3:1 Motor Drive Assembly. Ensure that Drive Shaft operates freely.

8.5.9 Filter Wheel

1. Description

This section describes the procedures to remove the Filter Wheel Assembly from the Pre-Slit Optical Bench. This procedure must be conducted in a Class 10,000 clean room environment.

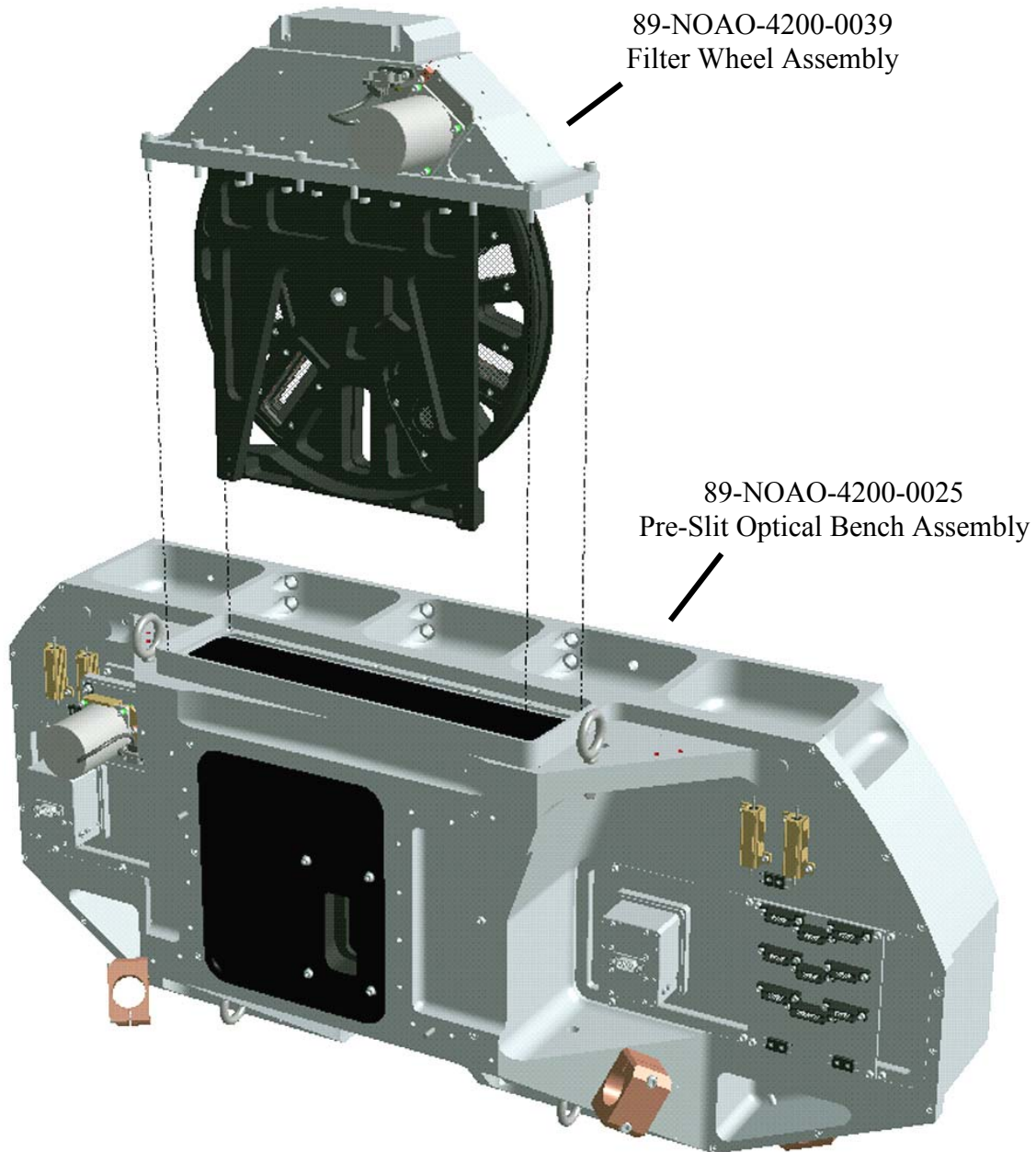


Figure 8.5.9.1. Remove 89-NOAO-4200-0039 Filter Wheel Assembly from the 89-NOAO-4200-0025 Pre-Slit Optical Bench Assembly.

2. Nomenclature

89-NOAO-4200-0039 Filter Wheel Assembly

89-NOAO-4200-0025 Pre-Slit Optical Bench Assembly

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

Fragile optical components: Use extreme caution when handling components.

4. Special Tools / Fixtures

89-NOAO-4202-0005 Filter Wheel Fixture Assembly

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1. The recommended number to complete this task is 1.

6. Procedures

- A. Disconnect P01M, P02M, and P02LS motor connectors from 89-NOAO-4200-0039 Filter Wheel Assembly.
- B. Loosen captive screws on 89-NOAO-4200-0039 Filter Wheel Assembly. Do not remove captive screws.
- C. Carefully lift Filter Wheel Assembly out of 89-NOAO-4200-0025 Pre-Slit Optical Bench Assembly.
- D. Place Filter Wheel Assembly into 89-NOAO-4202-0005 Filter Wheel Fixture Assembly.

7. Special Reassembly Procedures

- A. Follow removal procedures in reverse order.

8. Summary

This section outlined the procedures to remove the Filter Wheel Assembly from the Pre-Slit Optical Bench. This procedure is conducted in a Class 10,000 clean room.

After completion of this task, proceed to Section 8.5.10 to continue with mechanism removal procedures.

8.5.10 Slit / IFU Module

1. Description

This section describes the procedures to remove the Slit and IFU Modules from the Pre-Slit Optical Bench. This procedure must be conducted in a Class 10,000 clean room environment.

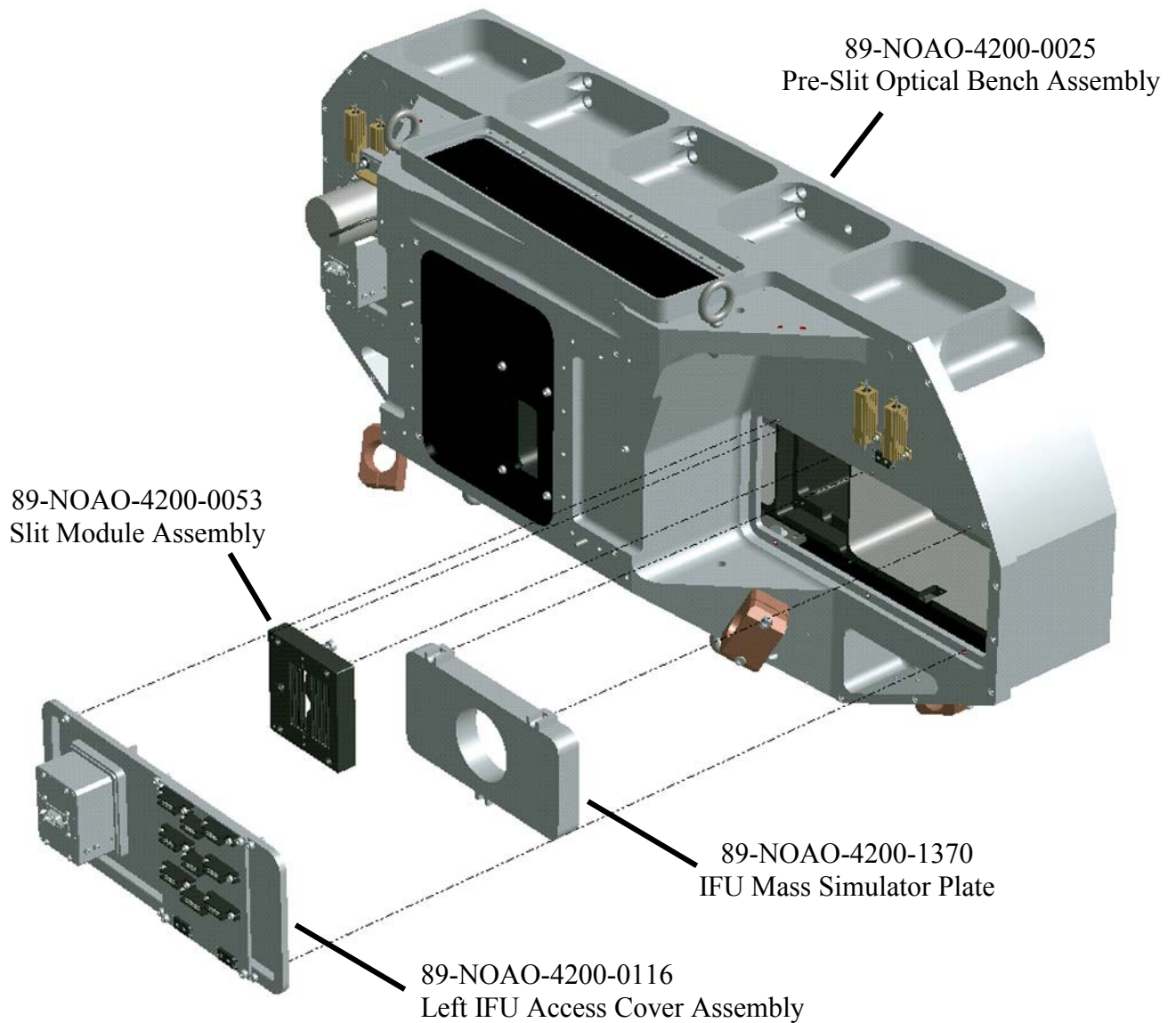


Figure 8.5.10.1. Remove 89-NOAO-4200-0116 Left IFU Access Cover Assembly from the 89-NOAO-4200-0025 Pre-Slit Optical Bench Assembly. Next remove the 89-NOAO-4200-1370 IFU Mass Simulator Plate and 89-NOAO-4200-0053 Slit Module Assembly.

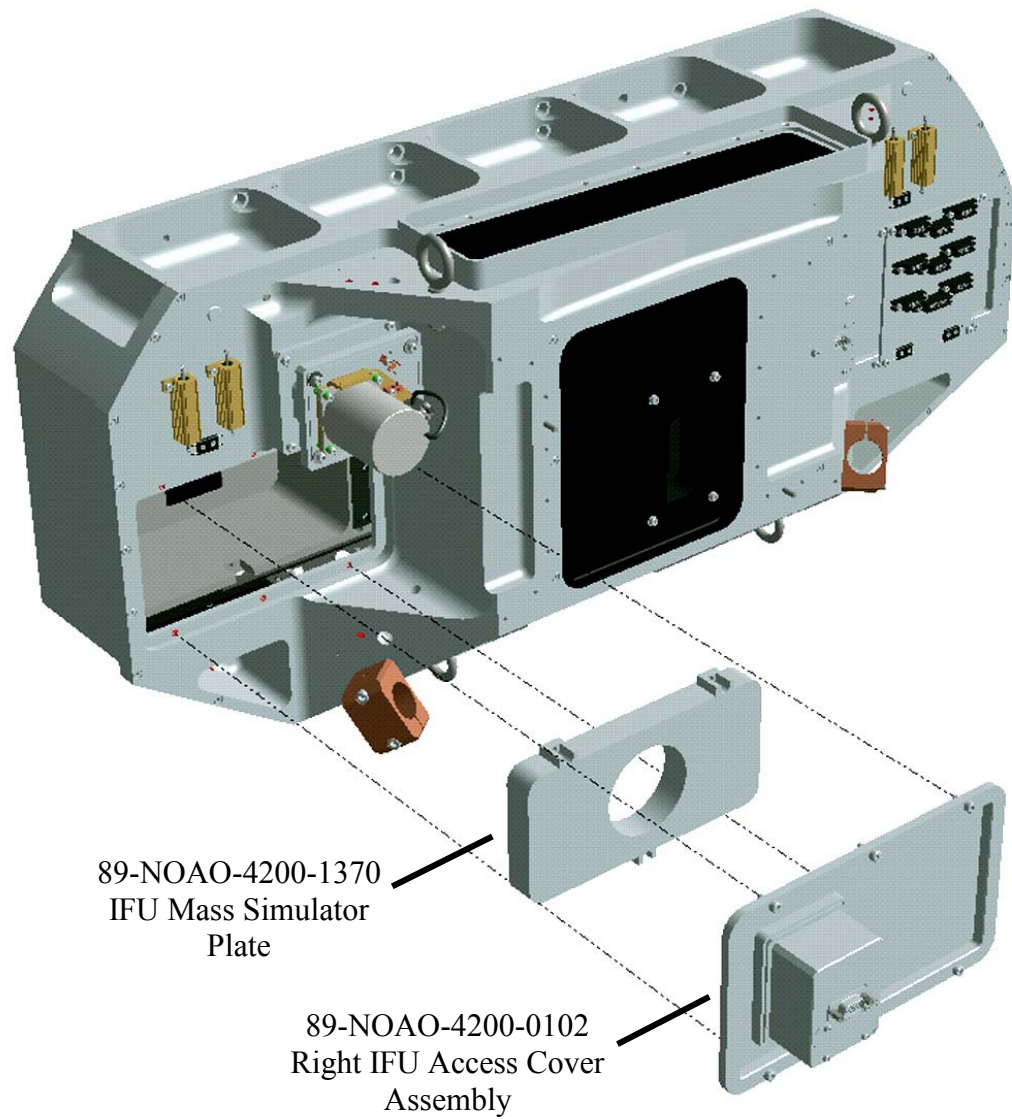


Figure 8.5.10.2. Remove 89-NOAO-4200-0102 Right IFU Access Cover Assembly from the Pre-Slit Optical Bench Assembly. Next remove the 89-NOAO-4200-1370 IFU Mass Simulator Plate.

2. Nomenclature

89-NOAO-4200-0025	Pre-Slit Optical Bench Assembly
89-NOAO-4200-0053	Slit Module Assembly
89-NOAO-4200-0100	3:1 Motor Drive Assembly
89-NOAO-4200-0102	Right IFU Access Cover Assembly
89-NOAO-4200-0116	Left IFU Access Cover Assembly
89-NOAO-4200-1370	IFU Mass Simulator Plate

3. Safety Precautions

Clean room environment: Use gloves when handling components. Observe guidelines for clean room attire and conduct.

4. Special Tools / Fixtures

No special tools or fixtures are required.

5. Personnel Recommended/Required To Complete Task

The required number of personnel to complete this task is 1. The recommended number to complete this task is 1.

6. Procedures

- A. Ensure Slit Slide has been driven to Slit Module access position. If not, Remove 89-NOAO-4200-0100 3:1 Motor Drive Assembly and manually turn drive shaft until Slit Slide is in position.
- B. Disconnect electrical connectors on 89-NOAO-4200-0116 Left IFU Access Cover Assembly.
- C. Loosen captive screws on 89-NOAO-4200-0116 Left IFU Access Cover Assembly. Do not remove captive screws.
- D. Remove 89-NOAO-4200-0116 Left IFU Access Cover Assembly.
- E. Remove 89-NOAO-4200-1370 IFU Mass Simulator Plate.
- F. Loosen captive screws on 89-NOAO-4200-0053 0053 Slit Module Assembly. Do not remove captive screws.
- G. Remove 89-NOAO-4200-0053 Slit Module Assembly.
- H. Move Slit Slide to opposite IFU access position. Refer to Section 6.2 and the Software Manual to move Slit Slide.
- I. Disconnect electrical connectors on 89-NOAO-4200-0102 Right IFU Access Cover Assembly.
- J. Loosen captive screws on 89-NOAO-4200-0102 Right IFU Access Cover Assembly. Do not remove captive screws.
- K. Remove on 89-NOAO-4200-0102 Right IFU Access Cover Assembly.
- L. Remove 89-NOAO-4200-1370 IFU Mass Simulator Plate.

7. Special Reassembly Procedures

- A. Follow removal procedures in reverse order.

8. Summary

This section outlined the procedures to remove the Slit and IFU Modules from the Pre-Slit Optical Bench. This procedure is conducted in a Class 10,000 clean room.

This concludes the mechanism removal procedures section. Refer to accompanying drawing package for further detail if necessary.