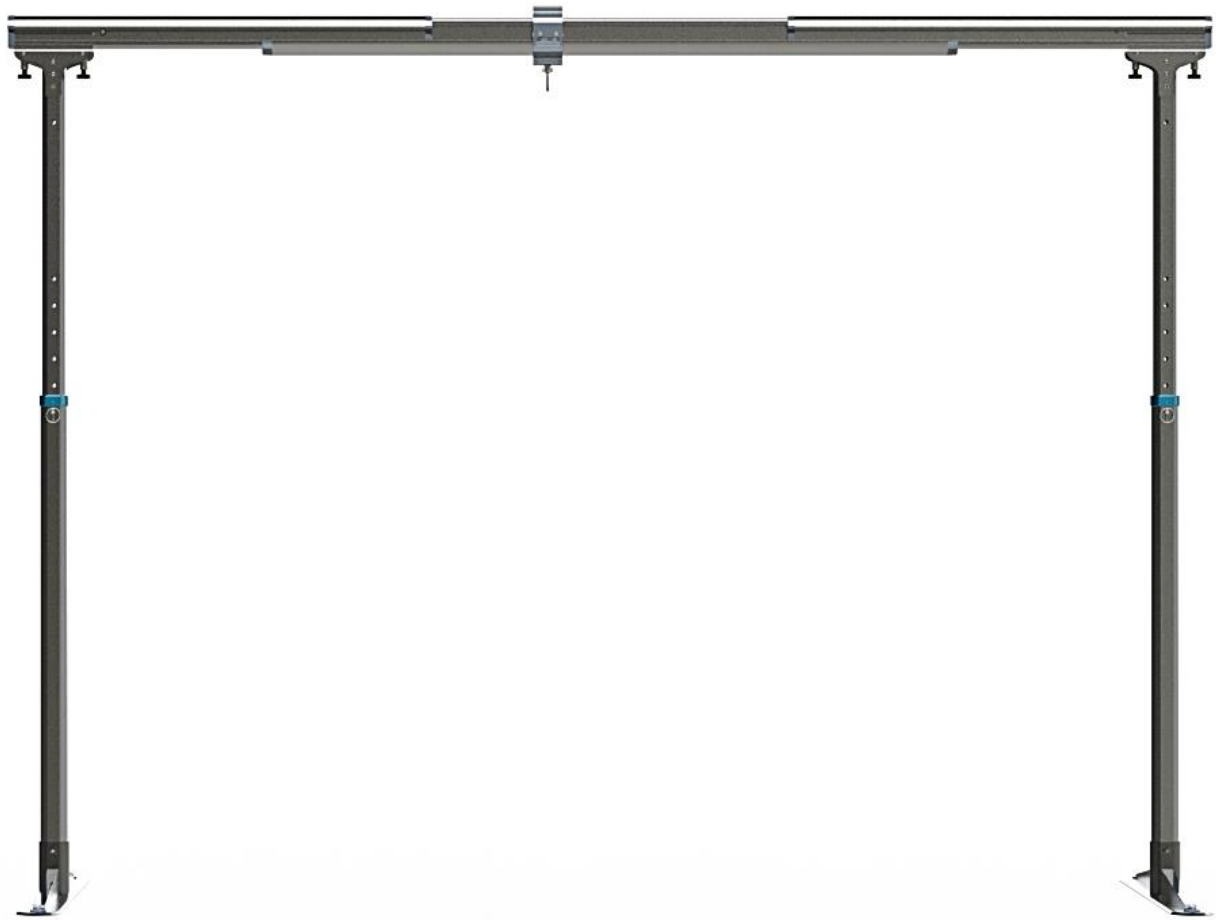


mackworth

FSG Portable Gantry



Service Manual

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1 Introduction

This manual will explain how to carry out interim servicing and parts replacement on the Mackworth FSG Portable Gantry safely and effectively. This document is divided into sections to help a Service Engineer find the correct information. Each section will show in a step by step fashion the correct way to disassemble and assemble the gantry. The aim of the manual is to advise and assist you, so that you can provide a successful service for the end user.

2 Safety Precautions

Read and understand this manual in its entirety before servicing the Mackworth FSG Gantry.

- Mackworth authorised personnel must complete the Full and Interim services of the FSG Gantry.
- The Gantry must not be in use by the user during any form of servicing.
- Ensure that all the servicing procedures are followed correctly as instructed in this manual.
- All listed tools and equipment stated in this manual must be used to safely service this gantry.
- Ensure you have assessed all risks for your environment and any persons within that environment before commencing work.
- Ensure you have all PPE available to carry out the work before commencing.

3 Tools and Equipment List

When carrying out work on the Mackworth FSG Gantry, you will require the following:

Tools Required	Equipment Required
2mm Allen Key External Circlip Pliers 3-10mm Digital Vernier Calliper Tape Measure	Step Ladder Marker Pen Lint Free Cloth Product User Manual Product Spare Parts Manual Product Commissioning Manual Test Weights -400lb or 660lb Weight Trolley Lifting Straps x2 (Attach weight to Carry Bar)

4 Preventative Maintenance

Maintenance should be completed by an approved service engineer every 6 months to ensure the products required standard is maintained. The service history of the product should be documented each service. This is documented in the service log, found in the back pages of the user manual.

When recording the service in the service log, ensure that the serial number of the gantry and user manual align. Each gantry is provided with its own user manual.

The below sub-sections provide detailed instructions on what must be inspected/tested for each component on the gantry every service. Follow the guidelines below for a successful gantry service.

4.1 Track and Trolley

- Inspect the length of the track for any damage such as cracks and deformation.
- Ensure that the track is able to adjust the length smoothly.
- Examine the trolley to ensure that it rotates and pivots smoothly.
- Ensure that the trolley is able to traverse along the track system smoothly.
- Ensure that the star handles securing the track to the legs are tight.

4.2 Support Posts

- Inspect the length of the support posts for any damage such as cracks and deformation.
- Ensure that the two posts can move freely during height adjustment.
- Ensure that the locking pins are secured in place with the clips
- Ensure that the two posts are installed at the same height for a horizontal track.
- Inspect the label integrity, and ensure that they are legible and aren't peeling from the post.
- Ensure the serial number is legible.
- Ensure the posts are installed in the same orientation.

4.3 Feet

- Inspect the length of the feet for any damage such as cracks and deformation.
- Ensure that the feet remain level on the floor, adjust the self-levelling screws where necessary.
- Ensure that the star handles securing the feet to the legs are tight.

5 Testing

The guidelines below will ensure that the main functional components of the gantry are functioning as intended following a service. **Functional testing should be done after each service.** The gantry will be installed with a ceiling track lift, the ceiling lift can be used to perform the function test.

1. Test the adjustment of the gantries support posts to ensure they move smoothly.
2. Test the adjustment of the track to ensure it moves smoothly.
3. Raise and lower the attached ceiling lift to ensure that the gantry is stable, and inspect the gantry under load to ensure it performs as expected. There should be no visible deflection during use.
4. Traverse the ceiling lift along the track to ensure it moves smoothly.

6 Additional Documentation

See the list of available documents you may or may not need to refer to for a successful service. All documents will be available to view on the Mackworth website: <http://mackworthusa.com>

- Spare Part Manual – 992548
- User Manual -999548
- Commissioning Manual – 996648

7 Removal and Replacement

This section will cover the details of how to remove, refit and replace all serviceable parts of the gantry. Ensure to read and understand each step thoroughly before removing any component from the gantry.

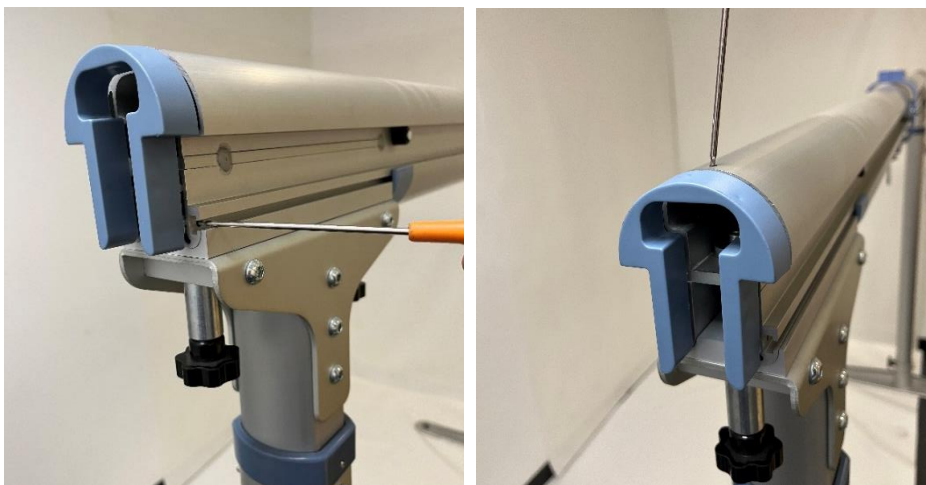
Before carrying out any dismantling of the gantry, the attached ceiling lift should be removed beforehand.

7.1 End Caps

This section will cover the details of how to remove, refit and replace the gantry end caps.

Removal

1. The End Cap clips must be detached to release the end cap. Locate the three holes in the track and use a flat head screwdriver or a similar tool to release the end cap clips.



2. Remove the end cap from the track as shown.



3. Repeat Steps 1 and 2 to remove the opposite end cap.

Refitting / Replacement

Refitting is a reversal of the removal process noting the following points:

- Refit the End Cap in the correct orientation. Ensure that the End Cap Clips locate correctly into the track for correct fitting. Loctite 401 can be used to secure a loose cap.

7.2 Track

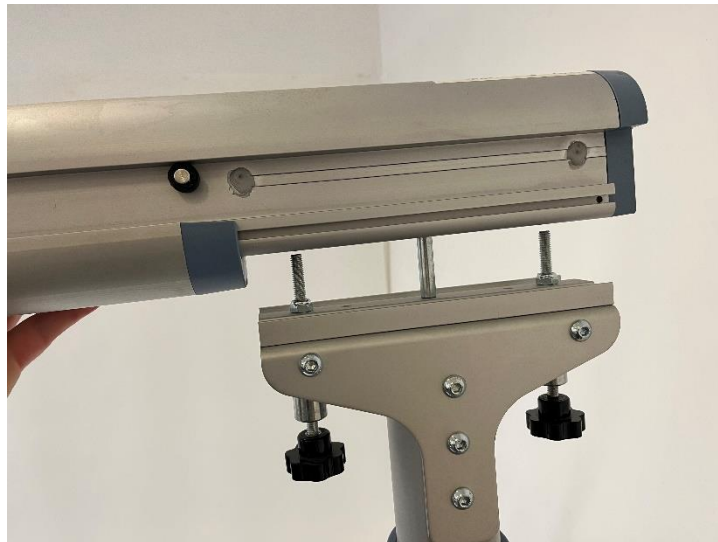
This section will cover the details of how to remove, refit and replace the gantry track.

Removal

1. If required, remove the End Caps from the Track.
2. Loosen the two star handles to release the track from the support post.



3. Loosen the two star handles at the opposite support post to release the track from its fixing.
4. Raise the track from the two support posts to remove.



Refitting / Replacement

Refitting is a reversal of the removal process noting the following points:

- When refitting the Track to the support posts, ensure that the two leg posts are the track length distance apart to locate the track onto the posts.
- Ensure the two support posts are in the same orientation.
- The track can be located in either orientation.
- Ensure to fully tighten the star handles to secure the track.

7.3 Trolley

This section will cover the details of how to remove, refit and replace the gantry trolley.

Removal

- 1.** The end stop must be removed to allow the trolley to escape. Using Circlip pliers, release the end stop pin.



- 2.** Remove the rubber bung from the pin.



- 3.** Remove the pin to release the trolley from the track.



- 4.** Detach the track from a single support post. See section 7.2 for guidance.
- 5.** Traverse the trolley from the track where the end stop has been removed.



Refitting / Replacement

Refitting is a reversal of the removal process noting the following points:

- Ensure that the end stop is refitted.

7.4 Support Post and Foot

This section will cover the details of how to remove, refit and replace the gantry support posts and feet.

Removal

1. Remove the Track from the Gantry. (Refer to section 7.2)
2. Unthread the large star handle from the foot which secures the post and foot together.



3. Raise the support post from its fixing within the foot.



4. Repeat steps 2 and 3 to remove the other post from the gantry.

Refitting / Replacement

Refitting is a reversal of the removal process noting the following points:

- Ensure that the bolt is fully secured once tightened.
- Ensure that the two support posts are in the same orientation when refitting.

Dealer/service contact details:

Contact details:

Mackworth USA
54 West Industrial Drive
O'Fallon, MO 63366 USA
314-889-1000
www.mackworthusa.com

Disclaimer

While every effort has been made to ensure the accuracy of information contained in this manual, no liability can be accepted by Mackworth for any errors or omissions. Mackworth operates a policy of continuous improvement. Specifications and other data are subject to change without notice.

