

Rice Lake Mechanical Chair Scale

Models RL-MCS-LB and RL-MCS-KG

Technical Manual



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Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at www.ricelake.com/training or obtained by calling 715-234-9171 and asking for the training department.



Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit www.ricelake.com/webinars

1.0 Introduction

The Rice Lake Mechanical Chair Scale is designed for those who have a difficult time standing on a scale. It is ideal for use in clinics and nursing facilities. The scale is durable, having a sturdy enameled steel body, a molded polypropylene chair, heavy-duty footrest and heavy-duty caster wheels for easy portability.

The Rice Lake Mechanical Chair Scale comes in two models:

- RL-MCS-LB (450 lb x 4 oz capacity)
- RL-MCS-KG (200 kg x 100 g capacity)



Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties



Figure 1-1. Rice Lake Mechanical Chair Scale (Lb version shown)

1.1 Safety

Safety Signal Definitions:



Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.



Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.



Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.



Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

General Safety



Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.



Failure to heed could result in serious injury or death.

Ensure sure every individual who operates or works with this unit has read and understands the following safety information.

Do not transport the scale while someone is on it — the scale is not designed for transporting patients.

To avoid cross contamination, the scale should be cleaned regularly.

Do not allow minors (children) or inexperienced persons to operate this scale.

Do not jump on the scale.

Do not use in the presence of flammable materials.

People who are physically frail should always be assisted by another person when getting on and off the scale.

Do not use the scale on slippery surfaces, such as a wet floor.

Do not weigh someone with this scale whose body or feet are wet, such as after they have taken a bath.

Do not use this product if any of the components are loose or cracked.

Do not drop the scale or subject it to violent shocks.

Ensure casters are in a locked position prior to the patient getting on and off the scale.

For accurate weighing, the scale must be placed on a flat, stable surface.

Weight exceeding the maximum rated scale capacity may damage the scale.

Avoid contact with excessive moisture.

The patient should be completely seated in the chair, not leaning forward, and having feet firmly positioned on the footrest assembly while being weighed.

For accurate weighing ensure that all loose clothing is clear of any moving scale parts.

Do not make alterations or modifications to the scale.

Any alterations voids the warranty.

1.2 Scale Dimensions

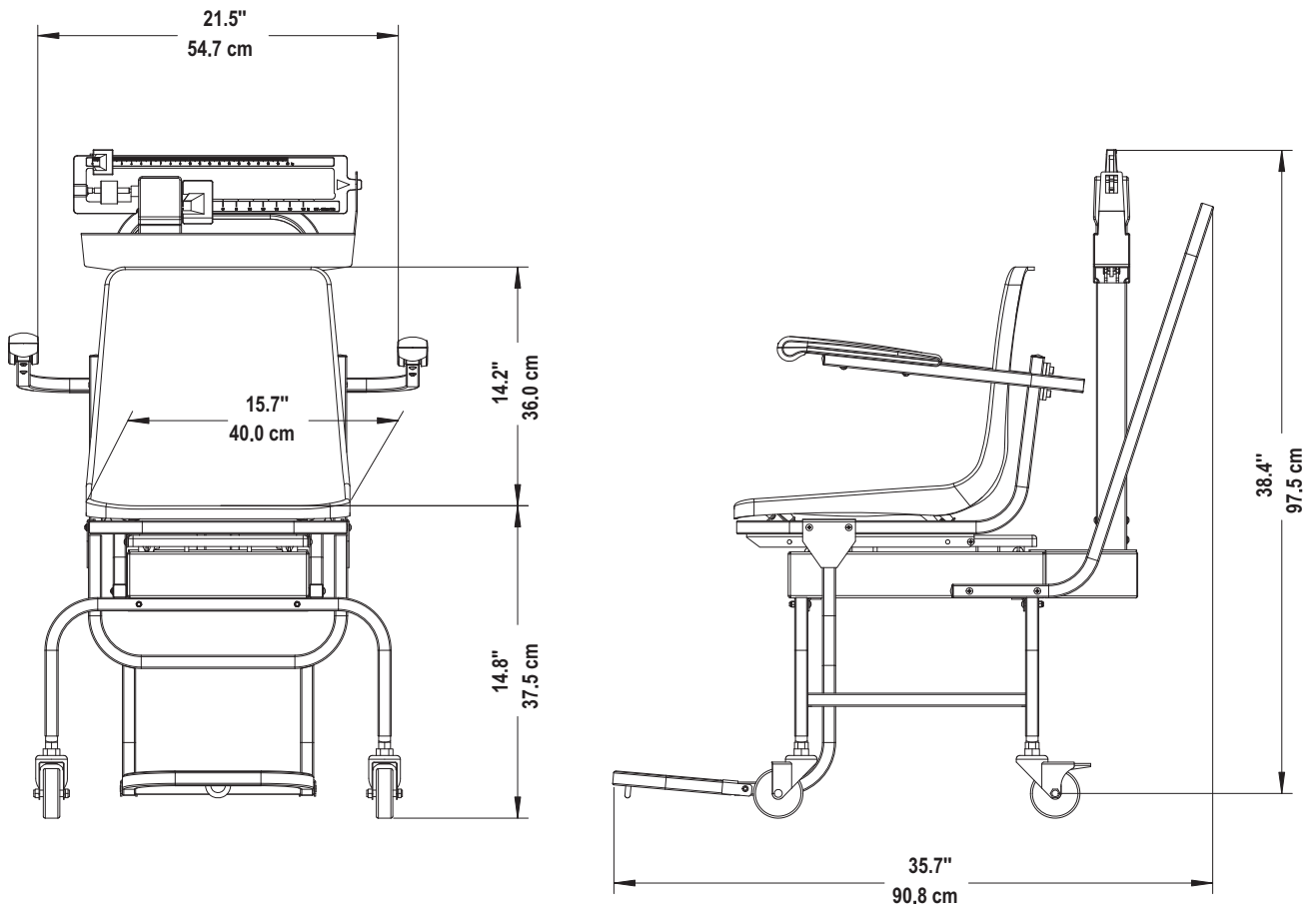


Figure 1-2. Mechanical Chair Scale Dimensions

2.0 Installation

The Rice Lake Mechanical Chair Scale will arrive partially assembled. Additional assembly is required for the following:

- Pillar/beam Installation ([Section 2.1](#))
- Steelyard rod connection ([Section 2.2 on page 6](#))
- Transport handle installation ([Section 2.3 on page 7](#))
- Chair and footrest installation ([Section 2.4 on page 8](#))
- Arm rest installation ([Section 2.5 on page 9](#))

2.1 Pillar/Beam Installation

The pillar/beam ([Figure 2-1](#)) comes detached from the scale base and must be attached prior to use.

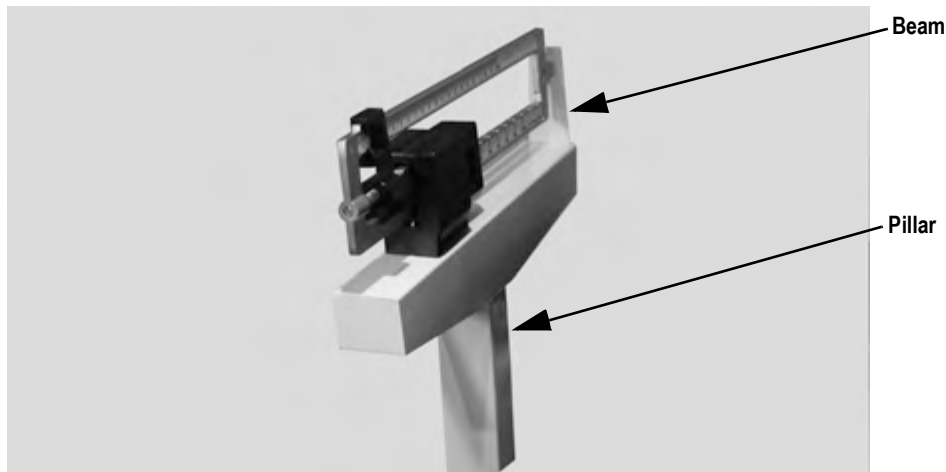


Figure 2-1. Pillar and Beam Components

The following tools will be needed to assemble the pillar and beam to the scale base.

- Phillips head screwdriver
- Multi-purpose tool (included) ([Figure 2-2](#))
- 5 mm Allen wrench (included)



Figure 2-2. Multi-Purpose Tool

Use the following steps to attach the pillar and beam to the scale base:

1. Lock the casters on the frame to keep the unit from rolling during assembly.

Push down on latching assembly to lock wheels and prevent scale from rolling.



Figure 2-3. Lock Casters

2. Remove the twist ties from the underside of the platform base. Ties are used to prevent the scale base from movement during shipping.

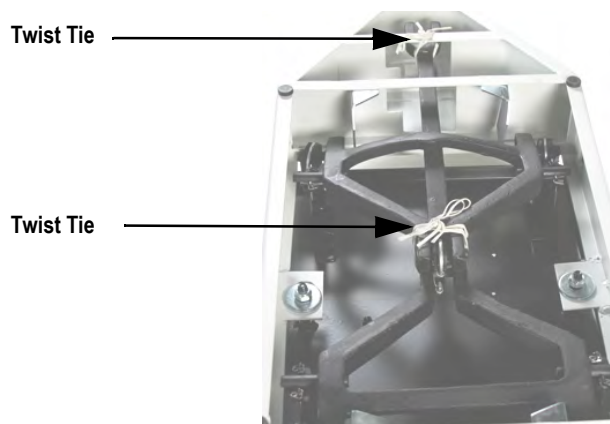


Figure 2-4. Remove Twist Ties from Platform Base (Underside of Platform Shown)

3. Remove the eight screws from the scale base and retain for installation.



Figure 2-5. Remove Screws from Scale Base

2.2 Steelyard Rod Connection

There is a steelyard rod located inside the pillar.

1. Remove the twist ties used to secure the steelyard rod during shipment.



Figure 2-6. Remove Twist Tie from Steelyard Rod

2. Move the pillar onto the base ensuring that the Rice Lake label on the pillar should be facing the patient/chair.
3. Attach the steelyard rod to the bottom of the scale using the J-hook. Figure 2-7 shows the hook of the steelyard rod and an inside photo of the ring in the scale bottom. Latch the hook onto the D-shaped ring.

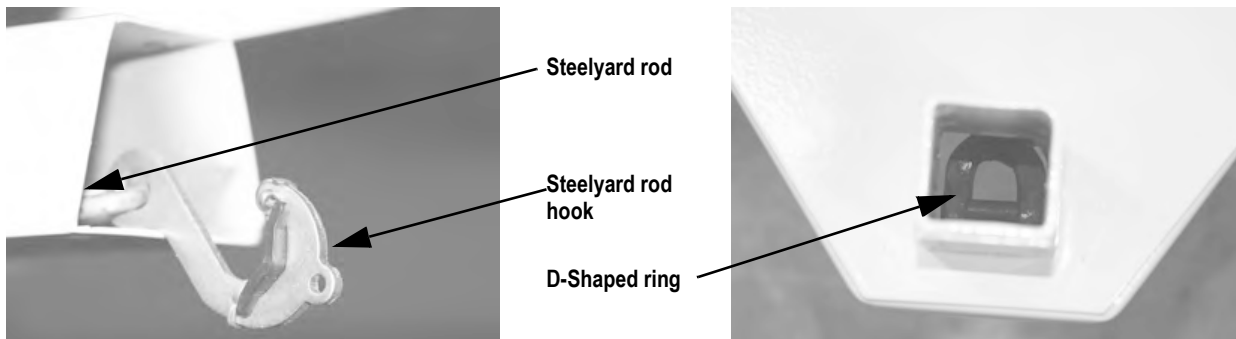


Figure 2-7. Attach Steelyard Rod to the Scale Base D-Ring

4. Set the pillar/beam assembly on the scale base assembly (See Figure 2-8).
5. Secure with the screws and star washers.

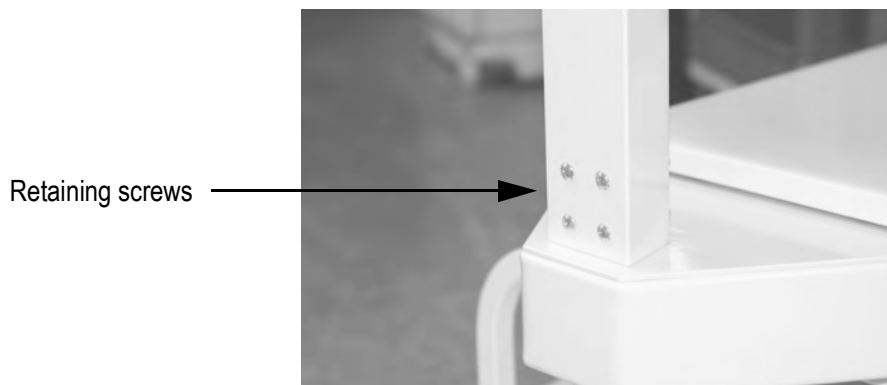


Figure 2-8. Pillar/Beam Assembly on Scale Base

2.3 Transport Handle Installation

Use the following steps to attach the transport handle to the scale.

1. Remove the four side screws (two on each side). Retain screws for reassembly.

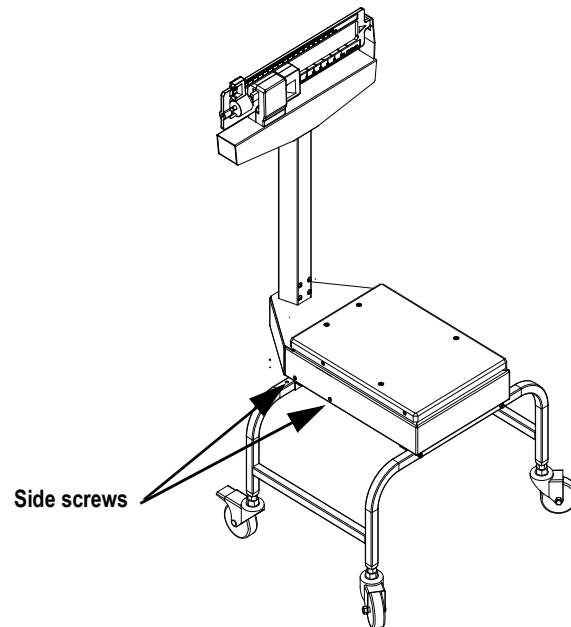


Figure 2-9. Transport Handle Installation

2. Align the transport handle to both sides of the scale support frame.
3. Insert and tighten the four screws using a Phillips screwdriver.

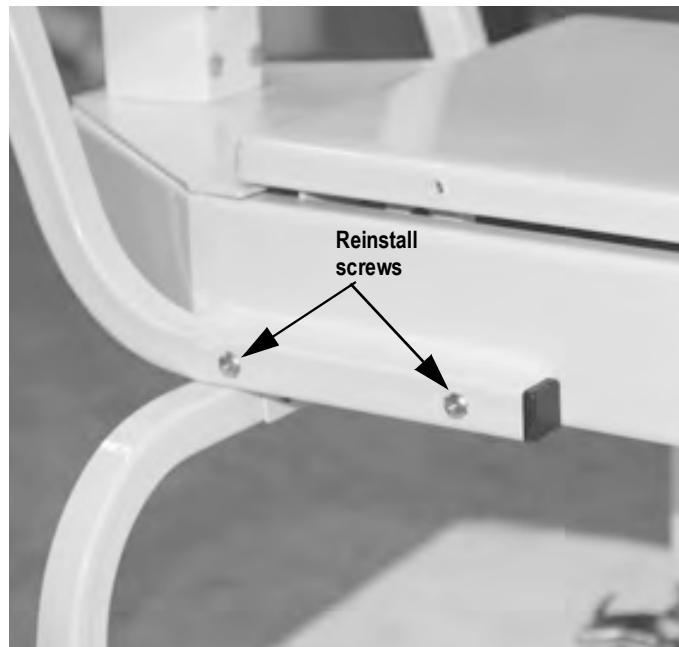
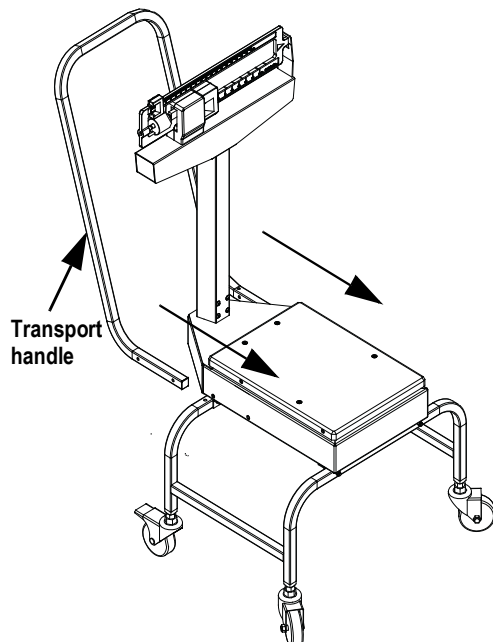


Figure 2-10. Secure the Transport Handle to the Scale Support Frame



CAUTION

The transport handle should fit snugly against the scale support frame.



IMPORTANT

Do not transport the scale while someone is on it — the scale is not designed for transporting patients.

2.4 Chair and Footrest Installation

Use the following steps to install the molded chair to the scale support frame:

1. Remove the four screws from the movable scale support frame platform. Retain screws for installation.

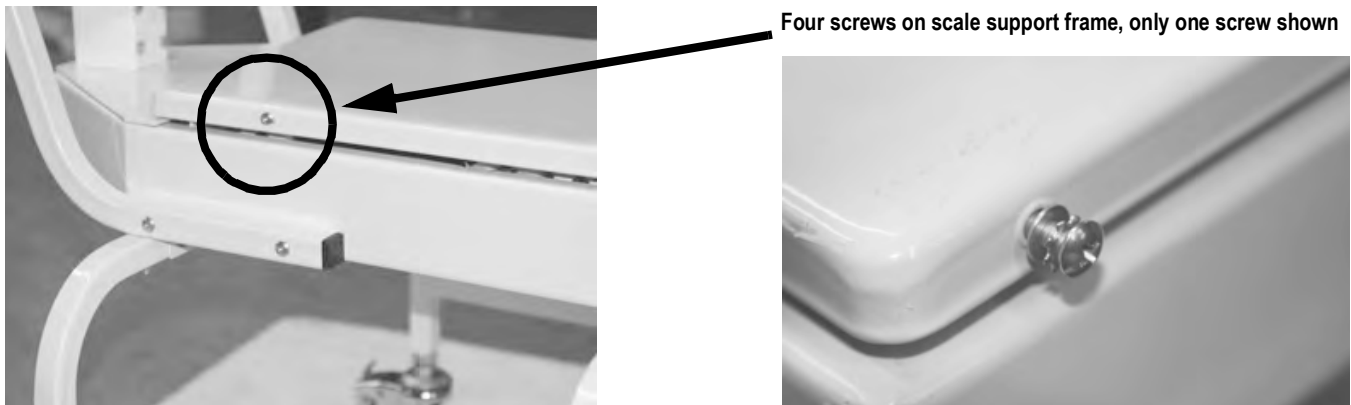


Figure 2-11. Removable Screws

2. Place the molded chair on the scale support frame platform; do not fasten the screws at this time.
3. Remove screws from the chair frame and retain them for installation.
4. Tilt the chair forward.

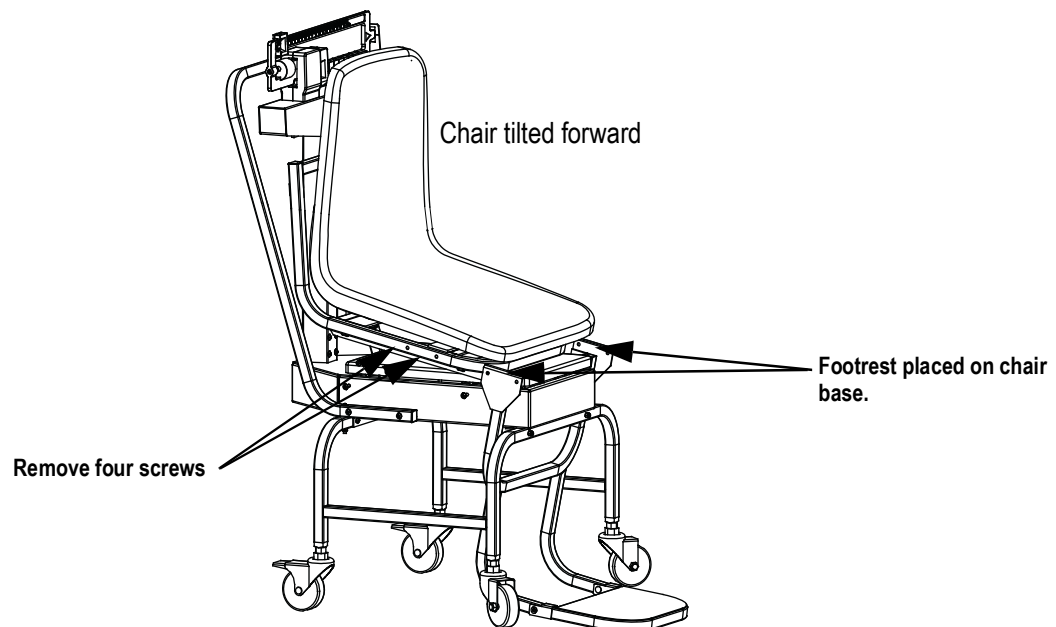


Figure 2-12. Tilt the Chair Upward Before Installing the Footrest Assembly

- Slide the footrest assembly onto the chair scale base aligning the holes to the chair scale frame.

**Note**

The footrest assembly will be hanging on the metal chair channel. Ensure the screw holes on the channel and the chair scale frame are aligned (See [Figure 2-13](#)).

- Secure the footrest assembly to the chair frame.



Figure 2-13. Install Footrest Assembly

- Tilt the chair assembly back and secure four screws.

Secure screws
(only one shown)



Figure 2-14. Molded Chair to the Platform Base

2.5 Arm Rest Installation

Detachable arm rests that can be rotated up and down for easy patient access.



Figure 2-15. Detachable Arm Rest for the Mechanical Chair Scale

Use the following steps to attach the two arm rests to the molded chair:

1. Align one of the arm rests to the bolt holes located on the back of the chair.

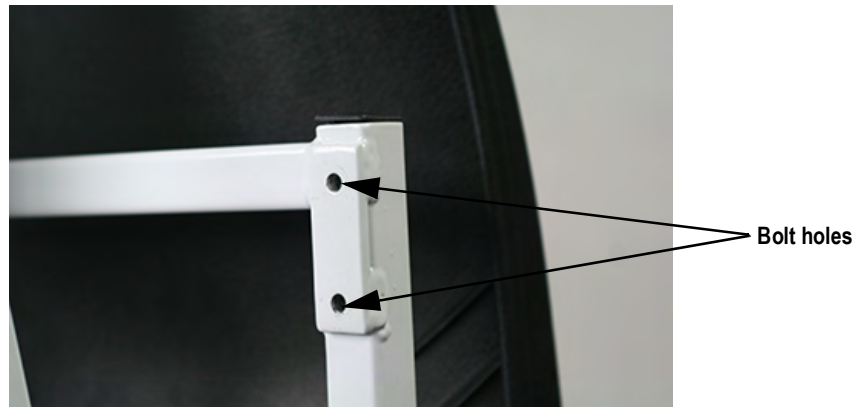


Figure 2-16. Secure Arm Rest to Chair

2. Secure one of the arm rests to the chair using two bolts and the 5 mm Allen wrench.



Figure 2-17. Secure Arm Rests to the Molded Chair

3. Repeat steps 1-2 for the other arm rest.



Figure 2-18. Secured Arm Rests

3.0 Operation

A zero adjustment must be done prior to first use and operation guidelines must be followed to ensure accurate weightments.

3.1 Zero Adjustment

To perform a zero adjustment:

1. Ensure the scale is sitting on a firm and level surface.
2. Ensure upper poise weight and large poise weight are fully against the left stop at zero.

IMPORTANT *Upper Poise weight must be fully against left stop to ensure accurate Zero Adjustment*

3. Observe the eye loop area on the scale to ensure that the scale pointer is equally balanced in the eye loop.

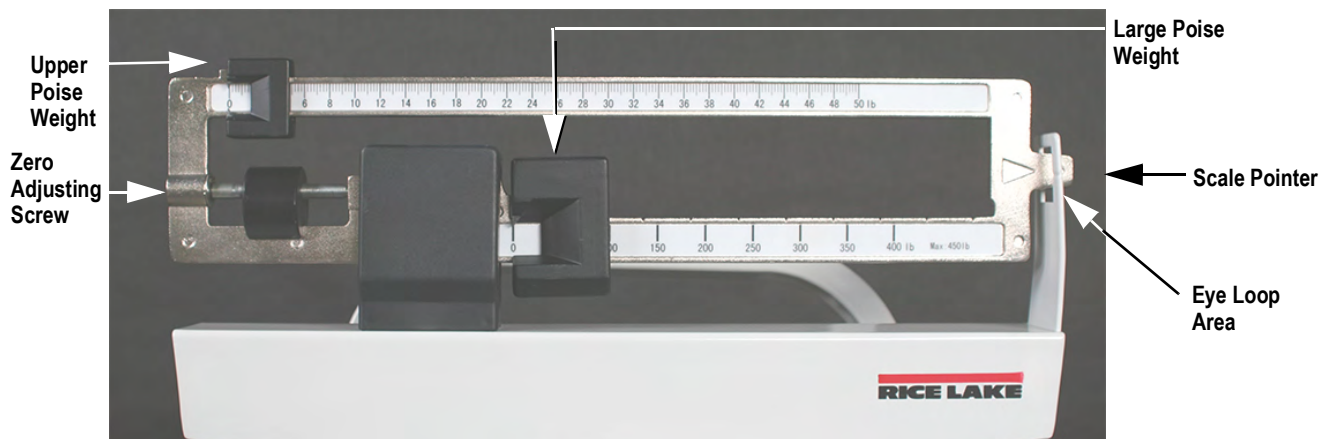


Figure 3-1. Zero Adjusting Screw Location (pound model shown)

4. Turn the zero adjusting screw until the scale pointer is in the center of the eye loop when set to zero.

3.2 Patient Weighing

To find a weightment:

1. Load patient onto the scale.
2. Slide the poise weights to the right until the Scale Pointer is equally balanced in the Eye Loop.
3. Calculate the sum of the numbers indicated by the Poise Weights on the bottom and top arms of the Weigh Beam to find the total load.

IMPORTANT *The following additional guidelines must be followed in order to ensure accurate weightments:*

**Oscillation of Scale Pointer in Eye Loop area is necessary for proper functionality*

**Adjust scale to zero as in Section 3.1 between each weightment*

**Patient must be completely seated in the chair, not leaning forward, and have feet firmly positioned on the footrest assembly while being weighed*

**All loose clothing must be clear of any moving scale parts*

**Ensure large poise weight is seated in a groove on the bottom arm of the beam*

4.0 Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for two years.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, **Protecting Your Components From Static Damage in Shipment**, available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither RLWS nor distributor will, in any event, be liable for incidental or consequential damages.

RLWS and buyer agree that RLWS's sole and exclusive liability hereunder is limited to repair or replacement of such goods. In accepting this warranty, the buyer waives any and all other claims to warranty.

Should the seller be other than RLWS, the buyer agrees to look only to the seller for warranty claims.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.

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