

# Fulcrum Inc.



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## Assembling DRX-3 Torsion Balance

The balance is a precision instrument which has been carefully adjusted for a maximum degree of sensitivity. Please handle all parts gently when unpacking. The pans and pan supports are packed in tissue under the lid of the balance. Remove these loose parts and set them aside. Do not dispose of any packing material until the balance is completely assembled and operating properly. Contact the carrier if there is any evidence of damage in transit.

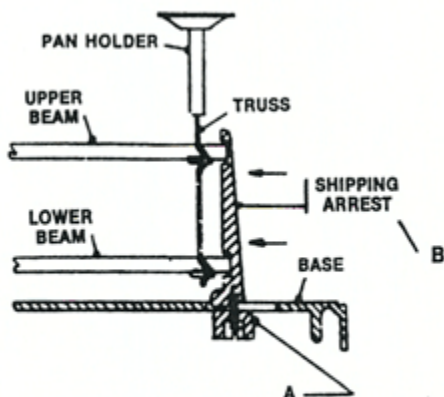


FIGURE 1

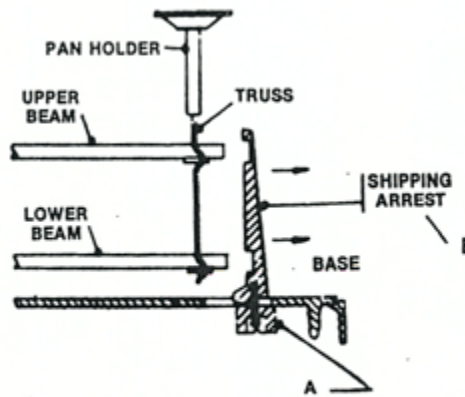


FIGURE 2

The balance is always locked with internal shipping arrest posts (B) before shipping to avoid breakage. Figure 1 illustrates the locked position, that is, with shipping arrest posts restraining the movement of the upper and the lower beams. Figure 2 shows the unlocked position with the shipping arrest posts moved away from the beams and secured in position for use.

## **UNLOCKING THE BALANCE**

1. Be sure the small operating knob in the lower front center of the base is turned clockwise to lock the balance. Lay the balance on its back and loosen the two knurled shipping arrest knobs (A) under the base (shown in figure 1). Do not touch the screw in the center of the knobs. Merely loosen the knobs slightly, push them as far as possible towards the ends of the balance, and tighten them again as shown in figure 2.
2. Place the balance upright on a firm, level vibration-free with the dial and operating knob facing the operator.
3. Place the pan holders on top of the trusses visible through the grommet openings in the glass on the top of the balance (Figure 2). Place the pans on the pan holders. If the balance has a scoop, it should be placed on the left-hand pan holder.

## **LEVELING THE BALANCE**

This is accomplished by turning both leveling screw in the same direction at the same time and in equal amounts. This will raise or lower the balance as required to bring the bubble in the level, located on the lower right side of the case, to the center of the vial.

## **ZEROING THE BALANCE**

Set the dial knob to zero. Release the balance by turning the operating knob in the lower, front center of the base counterclockwise. Bring the balance into equilibrium by means of the leveling screws as follows: If pointer moves to the right, turn the left leveling screw counterclockwise and the right leveling screw clockwise. The leveling screws should be rotated simultaneously and as equally as possible. If the pointer moves to the left, turn the left leveling screw clockwise and the right leveling screw counterclockwise.

The balance is now ready for use. If it does not operate properly, recheck the directions to be certain that all steps have been performed. Do not attempt any adjustments you may think necessary, other than those indicated in the instructions, without first contacting the factory. When you are satisfied that the balance is in proper operating condition, please complete and mail the post paid warranty card.

## **NOTICE**

Regulations regarding the inspection of prescription balances vary from one jurisdiction to another. To eliminate the possibility of any problems, you should, within 24 hours of receipt of your balance, contact your local Weights and Measures office to arrange for an inspection if it is required.

## **MAINTENANCE INSTRUCTIONS**

No oil or other lubrication is required nor should any be used on any parts inside the balance. An occasional drop of light machine oil on the operating shaft pivots and leveling screws is permitted. (Be sure to rotate the operating knob clockwise to lock the balance and remove the pans and pan holders before laying it on its back.)

Wiping the balance periodically with a dry, static-free cloth will maintain the exposed areas in good condition. The plastic lid is subject to static. It is treated at the factory but through cleaning, time and environment, static can build up. Generally when this occurs, the balance appears overly sensitive and difficult to zero. Most anti-static products used for computers will eliminate the static problem.

When the balance is moved by hand or transported, the shipping arrests must be locked. To do this, rotate the operating knob clockwise to lock the balance and remove the pans and pan holders. Lay the balance on its back and slightly loosen the shipping arrest knobs (A). Move them toward the center of the balance so that the shipping arrests (B) engage the beam ends (figure 1). **IF THE BALANCE IS TO BE SHIPPED ANYWHERE, IT MUST BE ARRESTED AS ABOVE. FAILURE TO DO SO, VOIDS ANY WARRANTY.** The pans and pan supports must be removed, wrapped and placed under the lid with the lid closed. The balance must be packed in a sturdy carton with sufficient cushioning to avoid damage in transit.

## **REPLACEMENT PARTS**

201024 - Leveling screw 201037 - Pan (pair)  
203013 - Plastic lid  
201034 - Pan holder (pair) 201749 - Hinge  
801028 - Dust cover

## **IMPORTANT:**

When contacting your distributor or the factory with regard to repairs, replacement parts or shipping instructions always refer to the serial number on the nameplate located on the balance.