

## USER MANUAL

**DR-TB3K**  
**DR-TB5K**



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**Delta Regis Tools Inc.**

7370 Commercial Circle  
Fort Pierce, FL 34951  
[www.deltaregis.com](http://www.deltaregis.com)

## Specifications

Model	Capacity	Stroke	Weight
DR-TB3K	1.0-3.0 kg	1.3 m	1.4 kg
	2.2-6.6 lbs	4.3 ft	3.1 lbs
DR-TB5K	2.5-5.0 kg	1.3 m	1.5 kg
	5.5-11.0 lbs	4.3 ft	3.0 lbs

- Read all instructions before operating tool.
- Keep this instruction manual with your tool.
- These specifications and design may be changed for improvement without prior notice.

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\* Before using your new spring balancer, please read this manual carefully to ensure proper use and prolong the life of the unit.

The following safety notations are used throughout the manual to highlight safety precautions for the user and for the machine.

 **DANGER**

DANGER indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in death or serious injury .

 **WARNING**

WARNING indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in death or serious injury.

 **CAUTION**

CAUTION indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in injury or material damage.

## 1. SAFETY INSTRUCTIONS(Spring Balancer)

Important safety instructions for all spring balancers. When using spring balancers, basic safety precautions should always be followed to reduce risk of personal injury.

### 1-1 Spring Balancer Installation

 **WARNING**

- Install the balancer correctly. Incorrect installation could cause personal injury or damage to the Spring Balancer or other equipment.
- Install secondary wire rope or chain to the spring balancer. If the spring balancer's main hanger of fitting link is damaged, it could protect workers' safety from accidents.
- Make sure that the assist wire rope or secondary chain should be mounted to a different location than the Spring Balancer's main hanger.
- Make sure that there is enough slack in assist wire rope or secondary chain, so that it is able to move freely. In this installation, if the main hanger breaks or falls down, make sure to leave only a small amount of slack to avoid injury.
- Install stronger fitting link than the maximum capacity of the Spring Balancer.
- The fitting link must be closed so that it does not fall when even Spring Balancer's shakes.
- Do not fix the main hanger of Spring Balancer. Make sure it can swivel freely.

### 1-2 Directions for the use of Spring Balancer

 **WARNING**

- Never pull down the cable while releasing spring tension.
- Never remove the tool from the Spring Balancer's hook while the cable is extended. The fast winding of cable could cause personal injury when you let go of the cable.
- Never work right under the suspended spring balancer and tool.
- Never Alter the Spring Balancer.

 **CAUTION**

- Always use within the capacity range of the Spring Balancer.
- Always adjust the spiral spring tension before using the Spring Balancer.
- Do not pull down the cable over its maximum weight.
- Cable should only be pulled straight down.
- Do not use more than two tools for one unit Spring Balancer.

**1-3 Maintenance and Inspection**

 **WARNING**

- Be sure to inspect the Spring Balancer on a regular basis.
- Stop using, if there is abrasion or damage on Cable or Hook.
- Never alter or disassemble the Spring Balancer.
- There is a coil spring in the body of Spring Balancer. If disassembled, the sudden expansion of the coil spring can cause personal injury.
- If you need your Spring Balancer repaired, contact your sales agency or Delta Regis Tools Inc. directly

**1-4 Disposal**

 **WARNING**

- Contact your disposal dealer, in case of disuse Spring Balancer. There is a sudden expansion of the coil spring then the balancer is disassembled which can cause injury or damage to property

## 2. USAGE

A Spring Balancer is a device which suspends a tool above the work area helping to balance the weight of the tool.

## 3. CHECK THE CONTENTS OF THE PACKAGE

When you pick the new balancer out from the box, you should check the contents and the condition such as breakages or oil leakages during transportation. You may refer the contents to the part list of manual. If you have any problem with our Spring Balancer, contact your sales agency or Delta Regis Tools Inc. directly.

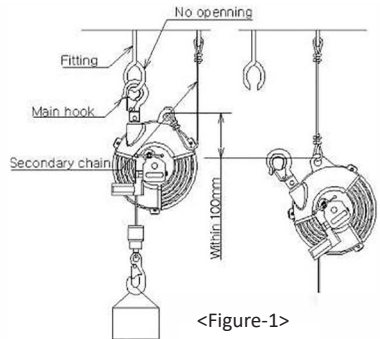
## 4. INSTALLATION

**4-1 Spring Balancer Installation (Figure-1)**

 **WARNING**

- You should install the Spring Balancer that has proper strength and strong fitting link for its capacity range. Anchor should hold at least 10 times of the strength of the Spring Balancer's maximum capacity.
- The fitting link must be closed so that it does not fall when even spring balancer is moved.
- Make sure that there is enough slack in assist wire rope or secondary chain, so that the spring balancer it is able to move freely.
- Do not fix the main hanger of spring balancer. Main Hanger should be able to swivel freely.

- 1) Attach the main hook of the spring balancer to the fitting link.
- 2) Make sure the Spring Balancer can move (rotation or gradient) freely.
- 3) Attach an end of the wire rope or secondary chain to the spring balancer's body.
- 4) Attach the other end of the wire rope or secondary chain to a separate fitting link which does not support the spring balancer.
- 5) Check the spring balancer is working smoothly with suspended tool.



### ⚠ CAUTION

- Use only weights within the capacity range of the Spring Balancer. In this case, calculate the total weight of tool and accessories (Air hose., wire etc) including the Spring Balancer's weight.

#### 4-2 Tool and device attachment & Tension adjustment

- 1) Make sure that the tool or device weight including accessories are within the Spring Balancer's specified range.
- 2) Adjust the coil spring tension to be in balance with tool or device.
  - Adjust the spiral spring tension with Hex. socket screw key(4mm).
  - Turn clockwise for increasing the spiral spring tension, and tum counter-clockwise for decreasing it.
- 3) Lift up the Tool or Device to the fitting link.

### ⚠ WARNING

- Make sure that there is no person or object under the hook, when you attach the hook or release the manual stopper lock. If the weight of the tools or device hanging on the hook(CARABINER) is heavier than the maximum spring tension, it could drop and cause personal injury.

#### 4-3 Secure work space

### ⚠ CAUTION

- Excessive cable's exposure or the maximum stroke of the cable could cause damage to the Spring Balancer and its life would be shortened.
  - Check that the working range is within cable stroke range.
  - If necessary, adjust the height of Spring Balancer or use a suitable Jig between the hook and tool.

## 5. OPERATING INSTRUCTIONS

### 5-1 Tool or device replacement

### ⚠ DANGER

- Never release the tool on cable's exposure. If tool release while cable's exposure, the fast winding of the cable would cause personal injury.

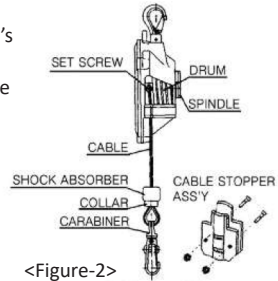
- 1) Only remove the tool when cable has been retracted on drum
- 2) Make sure that tool or device weight is within the Spring Balancer's range.
- 3) Adjust the coil spring tension to rotate spindle with HEX. SOCKET SCREW KEY( 4mm)  
Turn clockwise for increasing the coil spring tension and turn counter-clockwise for decreasing it.
- 4) Attach the tool or device to the spring balancer carabiner.

### 5-2 Cable Replacement (Figure-2)

#### ⚠ CAUTION

- Cable replacement can be done without the product disassembly. If you do need to disassemble Spring Balancer the coil spring tension should be situated at zero.

- 1) Set the spring's tension to zero by pulling down cable.
- 2) Remove the tool from the hook after checking of spring's tension is removed.
- 3) Remove the cable set screw (plug) and pull out the cable from the drum.
- 4) Separate the collar and shock absorber from old cable and assemble the new cable.
- 5) Attach the cable to the drum of inside of the case.
- 6) Assemble the cable set screw (plug).
- 7) The assembly is in reverse order of disassembly.



## 6. TROUBLESHOOTING

#### ⚠ WARNING

- Stop working and take precautions when you have trouble in using Spring Balancer.
- Never release Tool or Device until you find out the cause of trouble.

### 6-1 Solution for Cable trapped between drum and case

- 1) Pull down the cable when the tool is suspended on it.
- 2) When you can't pull down the cable any further, you can replace the cable after disassembling item 6-2
- 3) If necessary, replace the cable. Check cable integrity and if damaged replace.

### 6-2 Disassembly and Assembly

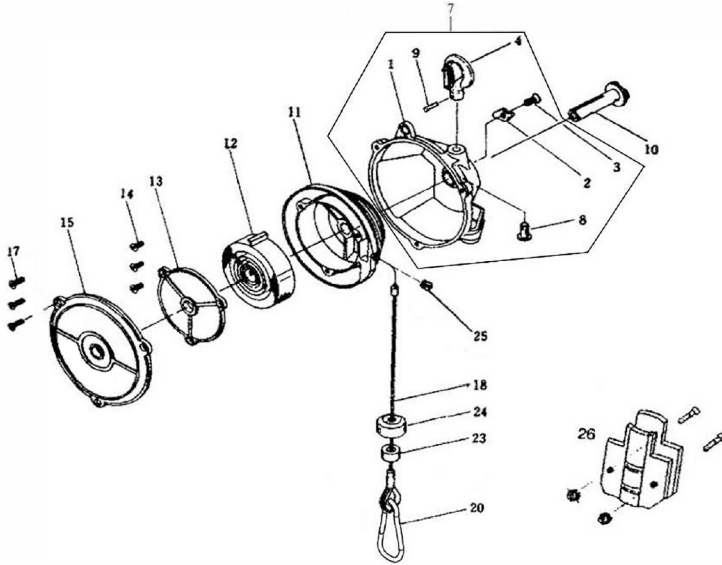
- 1) Adjust the Spindle coil spring's tension to zero.
- 2) Remove the tool.
- 3) Disassemble cable according to 5-2 cable replacement.
- 4) Release the bolt which connects the case and the cover . And disassemble the cover.
- 5) Disassemble the spindle.
- 6) Release the bolt which connects the drum and the drum cover and disassemble the drum.
- 7) The assembly is in reverse order of disassembly.

## 7. MAINTENANCE & INSPECTION

- 1) Periodically inspect the Spring Balancer and replace any damaged parts. Recommended to check every 30 days.

## 5. PARTS LIST

Please purchase a set or complete unit. Repairs should only be completed by qualified technicians



No.	Part No.	Description	Q'ty
7	DR-TB06214	Housing Assembly	1 Set
1	(DR-TQ08290)	Housing	1
2	(DR-TQ08308)	Ratchet	1
3	(DR-TQ08709)	Countersunk Head Screw	1
4	(DR-TR06216)	Main Hanger Assembly	1 Set
8	(DR-TQ08296)	Hanger Shaft	1
9	(DR-TQ08509)	Rivet	1
10	DR-TQ08309	Spindle	1
11	DR-TQ08298	Drum	1
12	DR-TQ08300	Coil Spring DR-RB3K	1
	DR-TQ08000	Coil Spring DR-RB5K	1
13	DR-TQ08299	Drum Cover	1
14	DR-TQ08708	Countersunk Head Screw	3

No.	Part No.	Description	Q'ty
15	DR-TQ08310	Housing Cover	1
17	DR-TQ05263	Countersunk Head Screw	3
18	DR-TB06219	Cable Sun Assembly	1
20	DR-TQ08263	Carabiner	1
23	DR-TQ08307	Collar	1
24	DR-TQ08306	Shock Absorber	1
25	DR-TQ08710	Set Screw	1

No.	Part No.	Description	Q'ty
26	DR-TQ08331	Cable Stop Assembly	1
		Instruction Manual	1



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