

Drum Weigher Installation Guide

Installing the Drum Weigher

Proper scale installation provides accurate and reliable system operation. It is essential to install the scale on a flat, level, and solid surface. The load-bearing surface areas should be within $\pm 1/16$ inch of the same level plane. Minor irregularities in the floor may be compensated for with the feet adjustments. The scale should not rock on the load-bearing surface areas and these areas should not give under loads. If you want your system to be permanently installed, the Drum Weigher comes with bolt openings on each corner so that the scale may be permanently mounted to a level surface. See Figure 1.

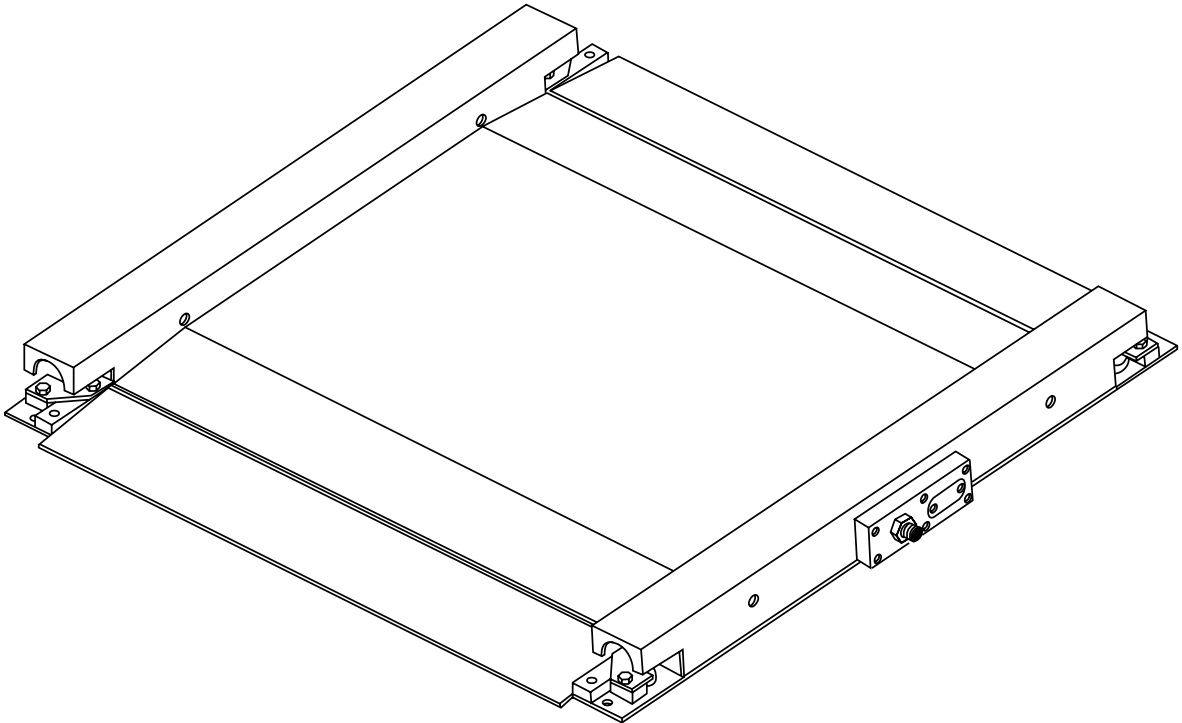


Figure 1
Standard Drum Weigher

After finding a flat, level surface on which to mount the Drum Weigher, locate the indicator interface cable and connect the indicator to the Drum Weigher via this cable (reference the next section **Indicator Interface Connections**). Once the Drum Weigher has been mounted and the indicator has been connected to it, verify the correct operation of the scale by placing weights on and off the deck and obtaining readings from the indicator. If the readings are accurate, you may begin using your Drum Weigher system. If the readings are inaccurate, proceed to the instructions under the **Corner Balancing the Drum Weigher** section on the following pages.

Indicator Interface Connections

Attach the indicator interface cable to the male connector on the side of the Drum Weigher. See Figure 2.

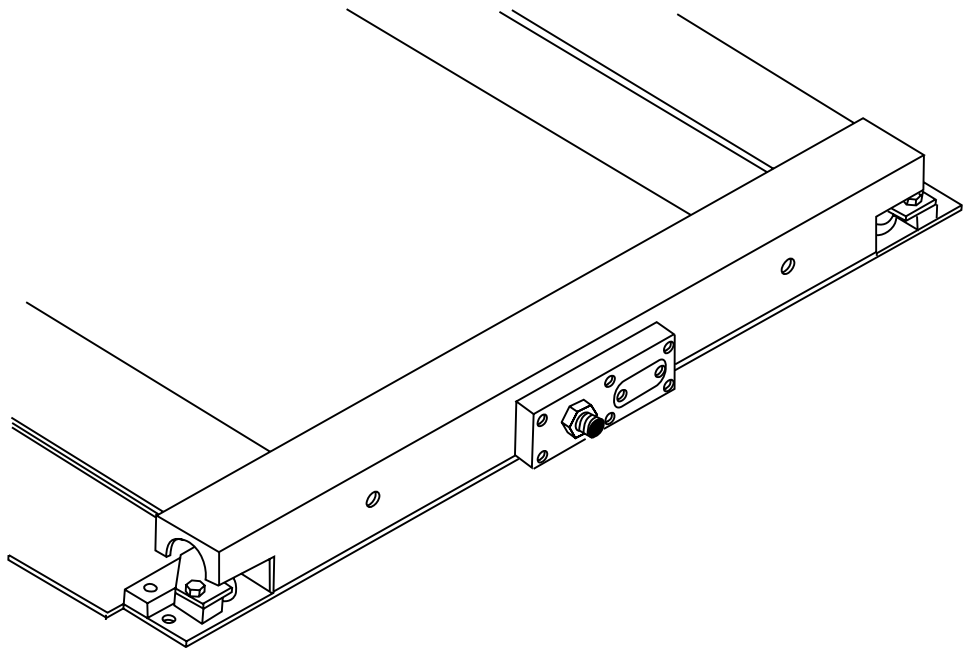
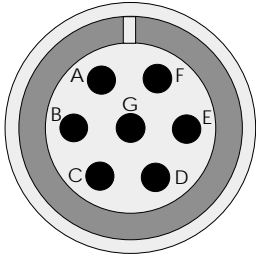


Figure 2
Junction Box with Connector

The end of the interface cable which attaches to the indicator will look different according to the style connection you have: 7-pin connector or a terminal block. To attach a 7-pin connector to the wires of your interface cable use the following diagram and color table. If you are using spade lug ends on the interface cable, use this table to match the appropriate wire to the appropriate terminal for your indicator.

Pin	W-T Wire Color	Signal
A	Red	(-) Signal
B	Green	(+) Excitation
C	White	(+) Signal
D	Black	(-) Excitation
E	Blue	(-) Sense
F	Yellow	(+) Sense
G	Shield	Ground



7-Pin Connector, solder cup side

Corner Balancing the Drum Weigher

The Drum Weigher's Weigh Bars™ were balanced at the factory, but in a new installation, you may want to verify the accuracy of the scale's balancing and calibration.

For the indicator to function properly, the signals reaching the indicator must be identical no matter where a weight is placed on the scale. Getting these signals to match is called corner balancing the scale.

Your goal is to get the outputs from the Weigh Bars to match. You do not have to get the correct weight reading at this point. That is taken care of when you calibrate your indicator. (Refer to your indicator's calibrating instructions.)

One potentiometer affects one Weigh Bar. See Figures 3 & 4 below.

R1 is the zero adjustment (dead load offset)
R5 is the corner balance for left front Weigh Bar (WB #1)
R2 is the corner balance for left rear Weigh Bar (WB #2)
R4 is the corner balance for right rear Weigh Bar (WB #3)
R3 is the corner balance for right front Weigh Bar (WB #4)

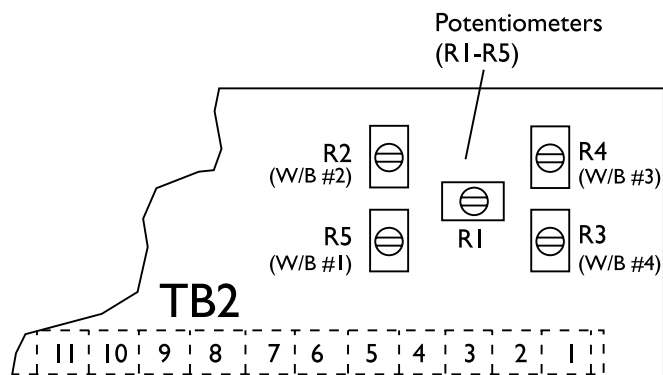


Figure 3
Corner Balance PC Board
(component side)

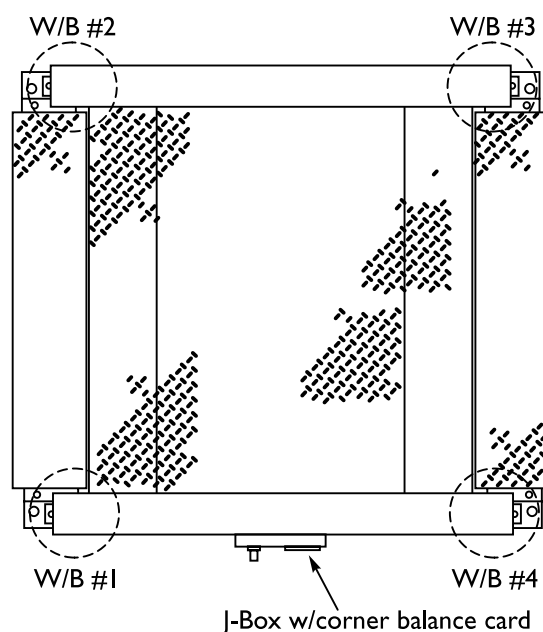


Figure 4
Deck with numbered Weigh Bars

You balance the Weigh Bars™ by adjusting the corresponding potentiometer on the corner balance PC board according to the steps listed below:

1. Remove the small junction box access cover to observe the potentiometers.
2. Use the R1 potentiometer to set the value of internal zero to the correct value for your particular indicator. (Refer to your indicator's calibration instructions.)
3. Use test weights equal to 20-25% of full capacity and obtain a displayed weight value for the test weight applied to each of the four Weigh Bars, like this:
 - 3a. Disable AZT on indicator.
 - 3b. Place certified test weight directly above first weight sensor.

- 3c. Record displayed weight value.
- 3d. Repeat steps 3b and 3c for each weight sensor.
4. If displayed weight values for all Weigh Bars equal each other, within ± 1 division, proceed to the next section, *Calibrating Final Span*.
5. If displayed weight value for any Weigh Bar varies from the others by more than ± 1 division, adjust the appropriate potentiometer by turning it the number of 360° turns indicated by this formula:

$$\frac{\text{Certified Test Weigh Value} - \text{Displayed Weight Value}}{\text{Certified Test Weigh Value} \times .0028} = \text{Number of Turns}$$

If the number of turns is a **positive** value, turn the potentiometer clockwise.

If the number of turns is a **negative** value, turn the potentiometer counterclockwise.

6. Repeat steps 3 & 4 above.

Calibrating Final Span

1. Make sure deck is empty and scale is zeroed.
2. Load deck with as much evenly distributed test weight as available (not to exceed scale capacity).
3. Unload deck and check for zero shift.
4. If necessary, rezero indicator and reload deck.
5. If necessary, adjust the span of the indicator for an indication precisely equal to the calibrated test weights applied to the deck. See your indicator's calibration instructions for details on this procedure.
6. Enable AZT on indicator. Your scale is now corner balanced and your system is calibrated.

Replacing a Weigh Bar™

To replace one or more Weigh Bars, follow this procedure:

1. Remove the large access cover to the junction box and remove the Corner Balance PC Board.
2. Disconnect Weigh Bar connector(s) from the terminal block on the PC Board. Reference the following diagram:

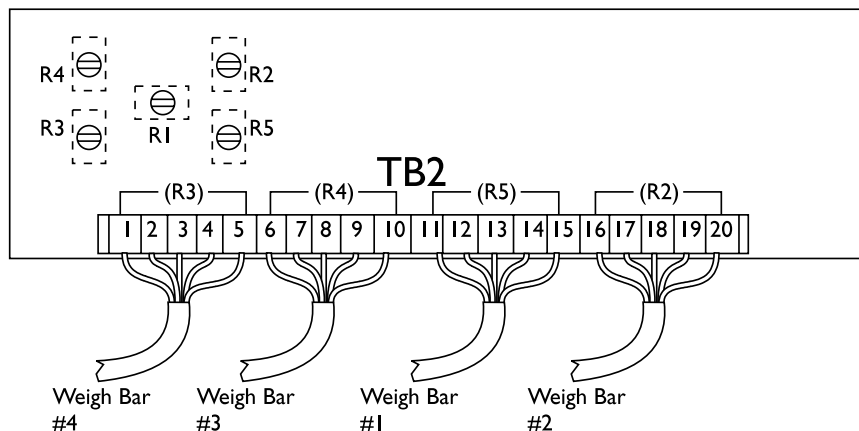


Figure 5
Corner Balance PC Board (Back Side)

3. Unbolt the foot-stop corner bracket and remove foot from the Weigh Bar to be replaced.
4. Place proper size punch through the small hole in the side of the scale and drive the roll pin out of the Weigh Bar support.
5. Pull the Weigh Bar out through the opening in the end of the scale.
6. Put anti seize compound on the recessed bar area.
7. Slide the new Weigh Bar into the vacant opening being careful to insert the new Weigh Bar in the same position as the old one.
8. Align roll pin holes and drive in roll pin.
9. Replace foot and foot-stop corner bracket.
10. Reroute Weigh Bar cable to the terminal board and reconnect.
11. Replace the PC Board.
12. Lower scale to floor and reconnect.
13. Check corner balancing of the scale and calibration. Adjust if necessary.
14. Replace the access cover on the junction box.

TB2 Pinouts

TB2-	Description	Wire Color
1	-OUT	RED
2	+EXC	GRN
3	+OUT	WHT
4	-EXC	BLK
5	SHIELD	WHT/ORN
6	-OUT	RED
7	+EXC	GRN
8	+OUT	WHT
9	-EXC	BLK
10	SHIELD	WHT/ORN
11	-OUT	RED
12	+EXC	GRN
13	+OUT	WHT
14	-EXC	BLK
15	SHIELD	WHT/ORN
16	-OUT	RED
17	+EXC	GRN
18	+OUT	WHT
19	-EXC	BLK
20	SHIELD	WHT/ORN

Options

Installing the Wheel Kit

To allow for extra mobility, an optional wheel kit is available which includes four wheel assemblies, four corner posts and a mounting channel for the indicator column (the column is sold separately). To install the wheel kit, reference Figure 6 below and follow these instructions:

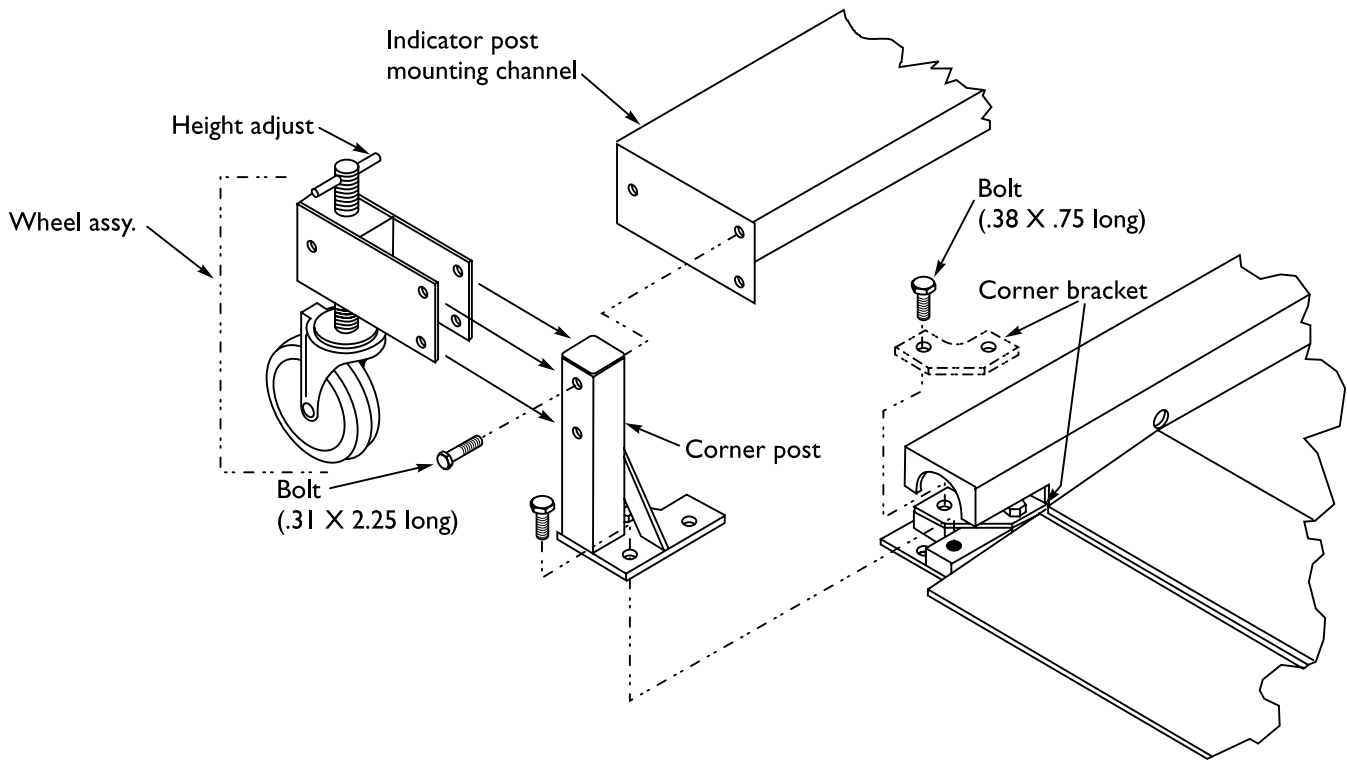


Figure 6

1. Unbolt the foot-stop **corner brackets** and remove.
2. Install the **corner posts** in the same position as the removed corner brackets and bolt the corner posts into place using the same 2 bolts removed from each foot-stop corner bracket plus an extra bolt included with the kit.
3. To mount the wheels, the holes on the wheel assemblies must be aligned to the holes on the corner posts and bolted into place. To install the mounting channel (which should be installed on the side of the scale where the indicator connector and junction box are located), you must position/align it before mounting the wheels to the corner posts and then run a bolt through all three pieces--the mounting channel, the wheel arm and the corner post.
4. You may raise and lower the wheels by turning the lever located on the top of each wheel bolt.

Installing the Indicator Mounting Kit

If your installation requires an indicator to be attached to the scale, an indicator mounting kit is available. This kit includes two corner posts and a mounting channel for the indicator column (the column is sold separately.) To install the indicator mounting kit, reference Figure 7 below and follow these instructions:

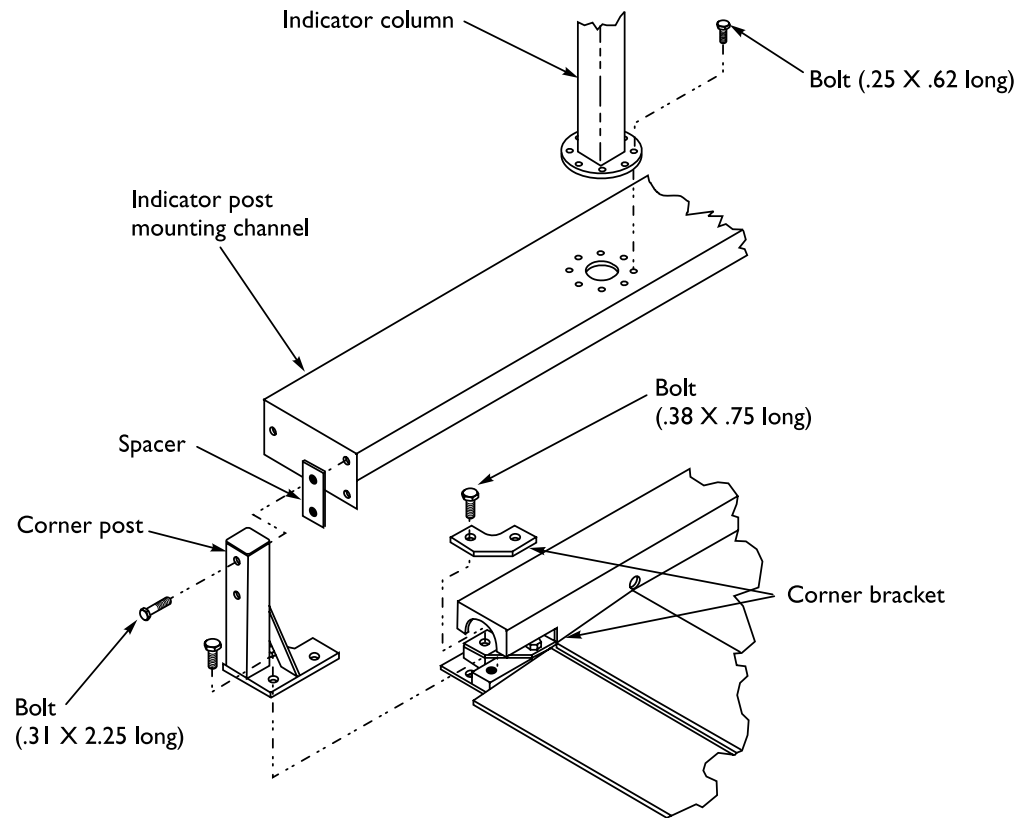


Figure 7

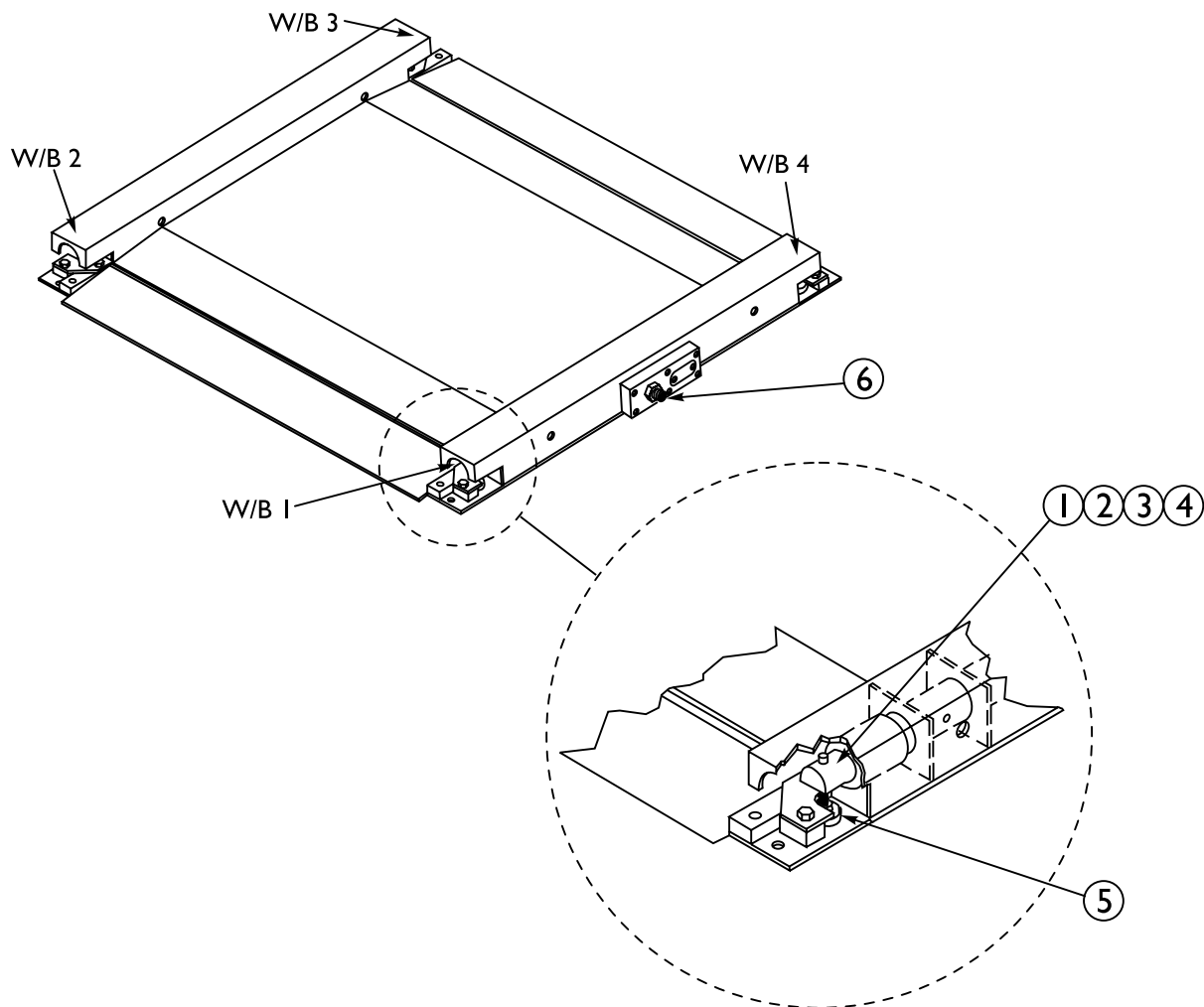
1. Unbolt the foot-stop **corner brackets** and remove.
2. Install the **corner posts** in the same position as the removed corner brackets and bolt the corner posts into place using the same 2 bolts removed from each foot-stop corner bracket plus an extra bolt included with the kit,
3. Position the mounting channel between the two corner posts, align the holes, insert a spacer between the end of the mounting channel and corner post, and bolt securely into place.

Installing the Indicator Column

Before the indicator column may be installed, you must first install either the Wheel Kit or the Indicator Mounting Kit. To install the indicator column, follow these instructions:

1. Determine which direction you wish your indicator to face for the best visibility.
2. Align the appropriate holes in the bottom plate of the indicator column to the corresponding holes in the mounting channel and bolt into place using the four screws included in either the Wheel Kit or Indicator Mounting Kit.
3. Install your indicator in the bracket mounted at the top of the indicator column.

Replaceable Parts List



	Part No.	Description	Qty
1.	46773-0024	Weigh Bar, 500 lb, stainless steel, 2 ft. cable (W/B 1 & 4)	2
2.	46773-0073	Weigh-Bar, 500 lb, stainless steel, 6 ft. cable (W/B 2 & 3)	2
3.	45364-0021	Weigh-Bar, 500 lb, carbon steel, 2 ft. cable (W/B 1 & 4)	2
4.	45364-0070	Weigh-Bar, 500 lb, carbon steel, 6 ft. cable (W/B 2 & 3)	2
5.	45991-0048	Foot ass'y with pad	4
6.	29920-0014	PC Board with connector (J-Box)	1

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