



# OSBORNE

For Osborne Survey Scales™ and Osborne FIRE® Weigh Races

## LOAD CELL ELECTRICAL ISOLATION KIT Installation Instructions KR-FFD600

Follow these step-by-step instructions to install the Load Cell Electrical Isolation Kit, KR-FFD600. This Kit contains all the parts that you will need. Identify these parts with the drawing on the reverse side and to the current load cell assembly on your scale. Refer to the Parts List and drawings that came with your scale to help you to recognize the changes that you will make.

1. Disconnect the scale arm hook bolt from the load cell eyebolt by lifting the long weigh arm (3) and manipulating the hook bolt to remove the hook bolt from the eyebolt. Twist the hook bolt counter-clockwise to unscrew it from the lower yoke end. Gently allow the long weigh arm to swing downward until the weigh basket is resting on the floor and the weigh arm no longer moves downward.  
  
**CAUTION:** Personal injury may result if the long weigh arm is rapidly released before movement of the weigh basket stops or it is allowed to rest on any object or scale component.
2. Remove the yoke end from the long scale arm by removing the cotter pin and clevis pin from the assembly. Discard the hook bolt, yoke end, clevis pin, washers, and cotter pin.
3. Remove the two 5/16-in bolts, washers, and nuts fastening the load cell, in drawing (Item 8), to the mounting bracket. Discard the bolts, washers, and nuts.
4. Locate the isolation pad (11) and place it between the load cell mount (7) and the load cell (8). Notice that the holes in the pad are offset from center. Position the longer part of the isolation pad pointing toward the load cell. The extra length of the pad ensures that the load cell (8) is shielded from any contact with the mounting bracket (7).
5. Place a 1/4 x 1-3/4-in bolt (13) through the load cell from the top pointing downward. Insert the bolt through the isolation pad and align with the appropriate hole in the mounting bracket.
6. Locate a plastic shoulder bushing (12) and insert the bushing onto the bolt through the isolation pad and into the load cell from the bottom side of the mounting bracket top plate. This bushing isolates the bolt from contact with the top plate of the mounting bracket. Secure the bolt, using a 1/4-in flat washer and a 1/4-in hex loc nylon insert nut (20). Install a second bolt in the same way in the other load cell mounting hole. Tighten the nuts firmly, but without deforming the plastic isolation pad.
7. Locate the flexible load cell connector (14) and insert one yoke end through the large diameter hole on the weigh arm top channel (2) located below the load cell. Attach the upper yoke end to the load cell eyebolt (18) using 1-*ea* 1/4 x 1-1/4-in clevis pin (16), 2-*ea* 1/4-in flat washers (19), and 1-*ea* 3/32 x 3/4-in cotter pin (17). Bend one leg of cotter pin slightly to prevent release from the clevis pin.
8. Lift the long scale arm (3) upward until the lower yoke end and the **second** hole located from the end of the scale arm are aligned. Insert 1-*ea* 1/4 x 1-1/4-in clevis pin (16) with 1-*ea* 1/4-in flat washer (19) installed through the yoke end and the long scale arm. The long scale arm should hang from the load cell. Secure the clevis pin using 1-*ea* 1/4-in flat washer (19) and 1-*ea* 3/32 x 3/4-in cotter pin (17). Bend one leg of cotter pin slightly to prevent release from the clevis pin.
9. Inspect the flexible load cell connector (14) to ensure that it is not contacting the side of the hole in the weight arm top channel (2). If contact occurs, adjust the position of the mounting bracket (7) on the top channel. If contact cannot be eliminated, check that the lower yoke is correctly installed in the second hole from the end of the long scale arm (3), directly below the large diameter hole in the top channel.
10. The load cell assembly is now electrically isolated from the remaining steel scale components. If an electrical continuity tester or a volt-ohmmeter is available, electrical continuity between the load cell and scale frame can be tested and should be completely eliminated.



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# KR-FFD600 LOAD CELL ISOLATION KIT ASSEMBLY

| Item No. | Part Number | Description                                   | QTY. |
|----------|-------------|---|------|
| 1        | KS-PS0202   | End Assembly                                  | 2    |
| 2        | KS-SS0109   | Top Channel                                   | 1    |
| 3        | KS-PS0207   | Long Scale Arm                                | 1    |
| 4        | KS-PS0208   | Short Scale Arm                               | 1    |
| 5        | KS-PS0010   | Short Basket Hanging Link                     | 2    |
| 6        | KS-PS0205   | Long Hanging Link                             | 2    |
| 7        | KS-FSC181   | Load Cell Mount                               | 1    |
| 8        | KR-FDE230   | Fire Load Cell                                | 1    |
| 9        | RFN-2400    | Nut 5/16" Hex Loc Nylon ZP                    | 1    |
| 10       | RFM-4410    | Comp Spring 0.785" OD x 1.4" Long ZP          | 1    |
| 11       | SR-FFD601*  | Load Cell Isolation Pad                       | 1    |
| 12       | RFM-7423*   | Shoulder Bushing 1/4" ID x 5/16" OD 3/4" Long | 2    |
| 13       | RFB-1671*   | HHCS 1/4" X 1-3/4" Long SS                    | 2    |
| 14       | KS-SS0135*  | Flexible Load Cell Connector                  | 1    |
| 15       | KS-PS0206   | Medium Hanging Link                           | 2    |
| 16       | RFM-3819*   | Clevis Pin 1/4" x 1-1/4" Long SS              | 2    |
| 17       | RFM-3217*   | Cotter Pin 3/32" x 3/4" ZP                    | 2    |
| 18       | RFB-2310    | Eyebolt 5/16" x 2-1/2" ZP                     | 1    |
| 19       | RFW-1201*   | Washer 1/4" Flat SS                           | 6    |
| 20       | RFN-1401*   | Nut 1/4" Hex Loc Nylon Insert SS              | 2    |
| 21       | RFW-2000    | Washer 5/16" Flat ZP                          | 2    |

\*Parts in Kit KR-FFD600

