Since 1926

Replacement Spring Installation

Tools required: Two (2) $^{9}/_{16}$" box-wrenches; Pliers; Scissors (or wire cutters); Hammer

1. Open door to full open position.
2. Remove nut from top of old spring tube.
3. Hold top of tube firmly and remove bolt. **CAUTION: Tube is spring loaded.**
4. Remove old tube assembly. (Retain nut and bolt)
5. Install new pre-compressed tube assembly. **DO NOT pull pin until assembly is securely fastened to the unit.**
6. Attach bottom of tube to lower connection by aligning groove in tube with pin and tapping lightly with hammer.
7. Slide bolt through upper connection and secure with nut. (Cover may have to be maneuvered slightly to locate upper connection)
8. Once assembly is securely in place, cut nylon tie and remove pin.
9. If replacing hold open arm washer, clamp arm to the arm guide.
10. Remove nut and washer from the hold open arm.
11. Replace nut and new washer with offset hole.
12. Remove clamp and close door.

INSH-004 Rev. 2.0

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Spring Replacement – Roof Scuttle - Composite

Spring Removal

Tools needed for this procedure: *Two 9/16 box end wrenches, Bilco RS spring compression tool (TL-04 or TL-06), hammer, needle nose pliers*

Note: When replacing springs make sure to replace them one at a time and make sure the hold open arm is securely in place.

1) Open the cover of the door.

2) Using the 9/16 wrenches, remove the nut from the bolt, leaving the bolt holding the spring in place. (Figures 1 and 2)

Figure 1

Figure 2

Spring Replacement – Roof Scuttle - Composite

3) Using the appropriate RS spring compression tool (shown below) press down on the handle, allowing the bolt to be freely removed. Note: With the bolt removed, there is nothing holding the spring back other than your force with the compression tool. (Figures 3a, 3b and 4)

Figure 3a
TL-06 (for large composite springs)

Figure 3b
TL-04 (for small composite springs)

Figure 4

4) Slowly ease the pressure off of the spring, allowing it to expand to its full length. (Figure 5)

Figure 5

5) With the spring fully expanded, remove the upper half as well as the springs inside the tubing. (Figures 6 and 7)

Figure 6

Figure 7

6) In order to remove the base of the spring container from the spring shoe tap in an upward motion using a hammer. (Figure 8)

Figure 8

7) This concludes the removal of the spring.

Spring Replacement – Roof Scuttle - Composite

Spring Installation – Pre-Compressed Spring

*Note: The following steps are for installation of a pre-compressed spring. If you do not have a pre-compressed spring, skip to step 13 for installation of a spring with a spring tool.

8) Take the compressed spring and attach it to the frame by lightly tapping with a hammer as shown below. (Figure 9)

Figure 9

9) Rotate the spring upward so that it can be positioned in line with the bracket on the cover. You may have to slightly lower the cover in order for them to line up correctly. Once lined up, slide the bolt through the hole. Note: For doors that do not open to a 90-degree angle the hold open arm must be disconnected. (Figure 10)

Figure 10

10) Once the bolt is through the hole, put the nut on the other side and tighten it with the two 9/16 wrenches.

11) Now that the spring is securely in place, break the plastic tie and use it to remove the pin that is holding the spring in a compressed state. (Figure 11)

Figure 11

12) Open and close the door several times to ensure that the spring is fully functional and secure. This concludes the installation.

Spring Replacement – Roof Scuttle - Composite

Spring Installation – Using Bilco Spring Tool

*Note: These steps are for a spring that has been decompressed and requires a spring tool in order to install. For compressed springs go back to step 8.

13) With the door secured in the open position, place the base of the spring on the spring shoe and use the hammer to attach. (Figure 12)

Figure 12

14) With the base in place, first grease and slide the larger of the two springs in, followed by the smaller of the two, and then place the cover on top of the spring. (Figures 13,14, and 15)

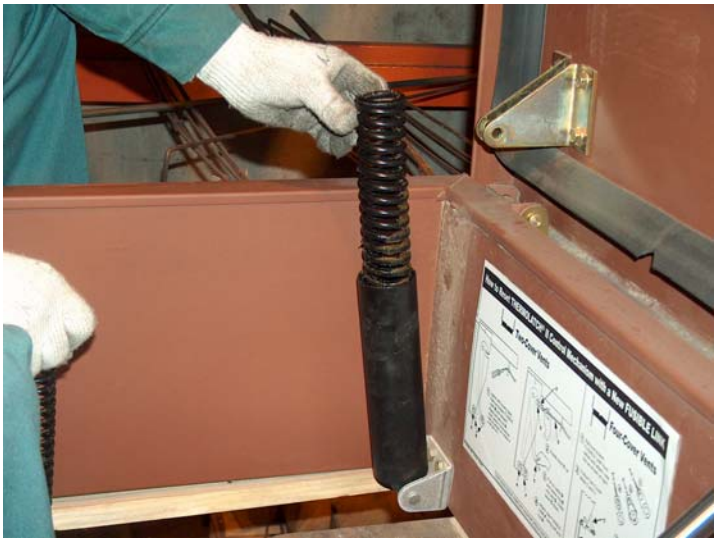

Figure 13

Spring Replacement – Roof Scuttle - Composite

Figure 14

Figure 15

15) With the spring placed together, use the appropriate roof scuttle plastic compression tool to compress the spring and align the hole in the spring with the hole in the spring ear and insert the bolt. (Figures 16 and 17)

Figure 16

Figure 17

16) Attach the nut to the bolt using the 9/16 wrenches. (Figures 18 and 19)

Figure 18

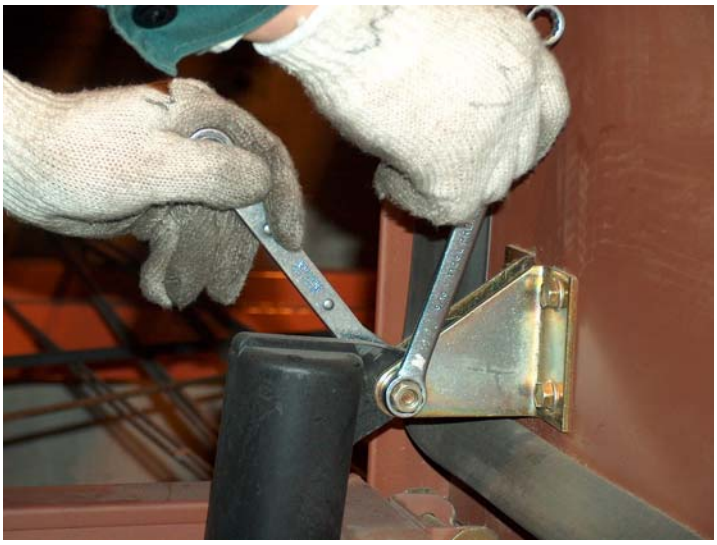

Figure 19

17) Open and close the door several times to ensure that the spring is fully functional and secure. This concludes the installation.

Spring Replacement – Roof Scuttle - Composite