CONVEYOR ACCESSORIES
BELT FASTENERS & TOOLS

RIV-NAIL

Technical Bulletin

Bulletin # 1009

Installation Instructions Riv-Nail Belt Fasteners

CAI Riv-Nail fasteners can be installed on conveyor belt using several methods. The most basic method is the “Single Driving” method using a RNAT (Riv-Nail Application Tool), see **figure 1**.

The belt ends are prepared; the belt thickness is then gauged to determine the appropriate rivet size. See **figure 2**. Always use a rivet long enough to go through the belt, never use a rivet that may be too short.

In **figure 3**, samples of R2, R3, TR4 and R5 are shown. The “U” shaped rod in the center of the table is used to lift the Gauge Rod Guides if there is a need to change from the basic R5 setting to the R5 ½ or R6.

A rapid install option is available as shown in **figure 4**. There is a 1kg hammer, a 2 kg sledge hammer, the belt gauge to select rivet sizes, a single driver punch and a 5-prong multi driver punch. These are used in conjunction with a RN500, 20 rivet block or a RN500DW that will hold 40 rivets.

In addition to the selection of hammers and drivers, 2 sizes of gauge rods are available. The basic 6.4 mm rod can be used on fasteners from R2 through R6 by setting the RN24 and RN25 to the proper selection as engraved on the anvil plates. See **figure 5**. When looking at **figure 6** note the gauge rod is much larger and used exclusively with R5 ½ and R6. The advantage of the larger gauge rod is to help control the loop of the fastener and to make it easier to install the hinge pins for thicker belts. When using this option, a gauge rod of 11 mm is used along with the RN716 gauge rod guide. These are shown in **figure 6**.

The basic requirement of the tooling is again shown in **figure 7**. This time you see the application tool that has a wider platform compared to the single driver tool. The

purpose of the wider platform is to support the guide pins of the RN500 or RN500DW. These are blocks of UHMW with a captive o-ring to keep the rivet blocks stable. Note, use some light oil or grease to lubricate the o-rings.

All Rapid Install Tools can use both the RN500 and RN500DW rivet blocks.

Figure 8 shows using the gauge rod guide lifter to set the guides to the proper size of fasteners. Always double check this setting prior to placing the fastener strip on the tool. **Figure 9** shows the belt fastener and belting in place, before the rivet guide block is set in place.

The rivets are loaded, as shown in **figure 10**. Load all rivets in the block before driving the rivets. A single driver may seem like a slow process, see **figure 11**, but lighter hammers can be used just as effectively as heavy hammers. By working the fastener and rivets from the loop to the outer edge, the job is completed in one pass. **Figure 11** shows a .5 kg hammer whereas **figure 12** shows a 1.0 kg hammer. Both yield excellent results.

A 2.2 kg hammer is shown, in **figure 13**, driving a 5 prong driver. Strong heavy blows are required. After all rivets are driven through the guide block, the rivets must be hammered several more times to fully set the rivets into the belt splice. **Figure 14** shows the RN500 with the 5 prong multi-driver.

After the rivets are driven through the rivet guide block, the block is removed from the tool as shown in **figure 15**. The RN500 is shown being removed in **figure 16**.

Figure 17 illustrates a multi-driver tool can be used as a single driver tool. Note the Riv-Nail is driven straight, not at an angle.

The finished belt splice is removed from the tool by pulling the gauge rod and lifting the belt. See **figure 18**. **Figure 19** shows the bottom of the belt splice. Note the flare of the rivets, indicating the rivets are fully clinched.

Figures 20 and **21** show the pilot nails from below the tool and the need to drive them from the tool. The pilot nails are quite sharp; please always complete the process of removing the pilot nails before storing the tool.

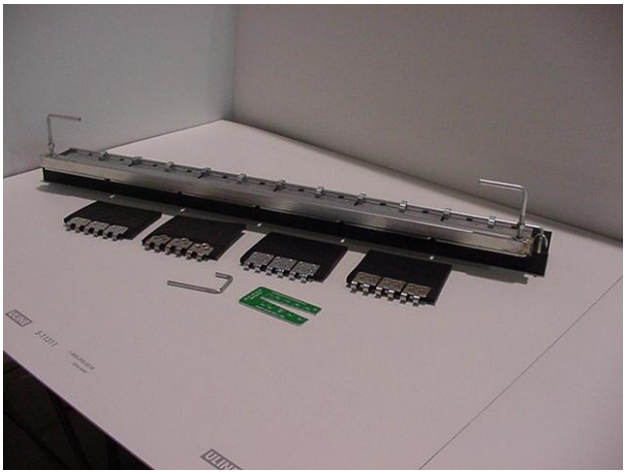

Fig. 1

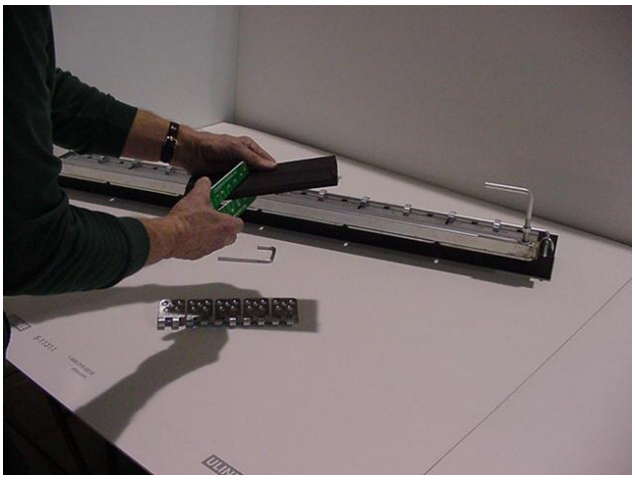

Fig. 2

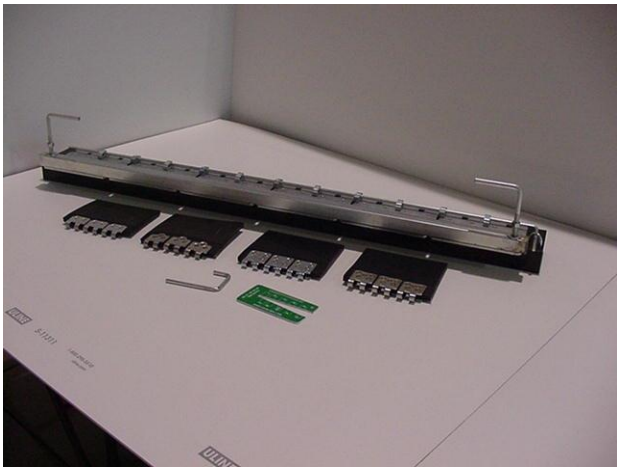

Fig. 3

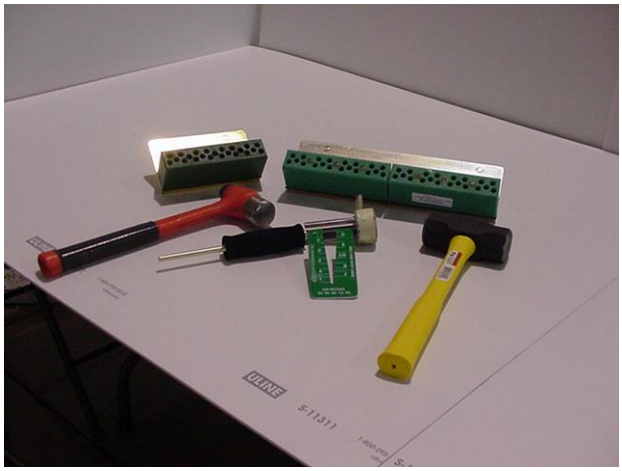

Fig. 4

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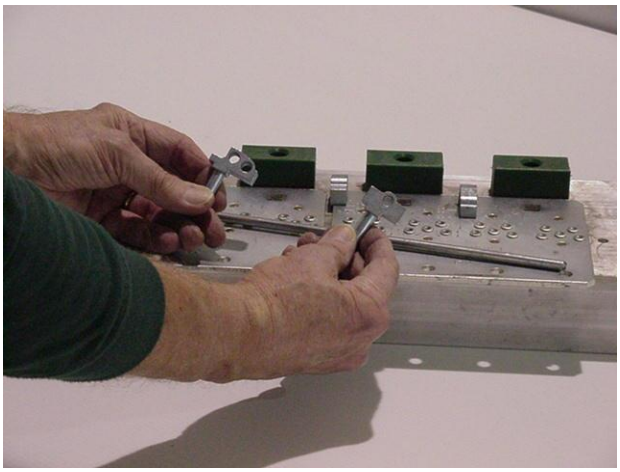

Fig. 5

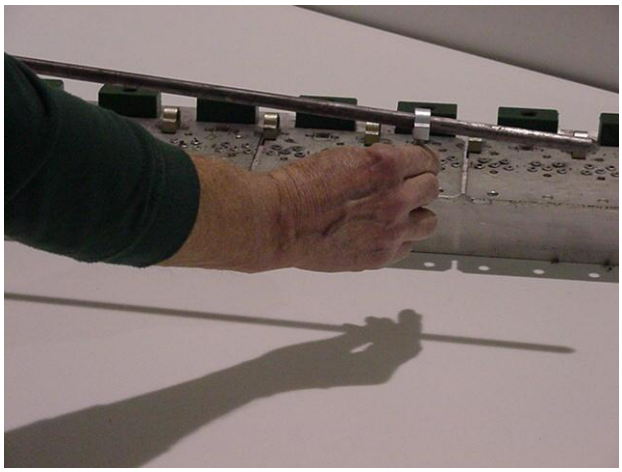

Fig. 6

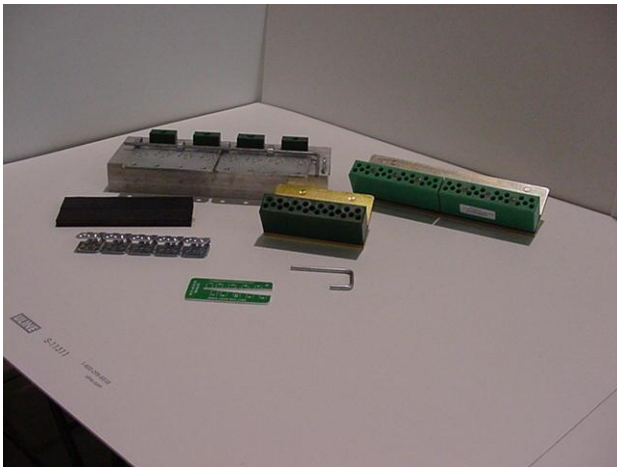

Fig. 7

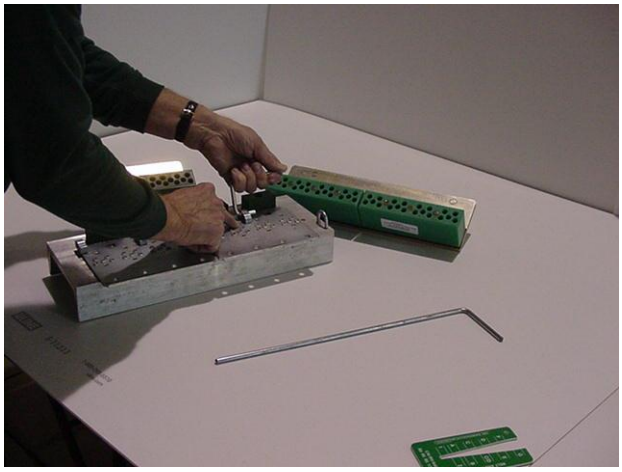

Fig. 8

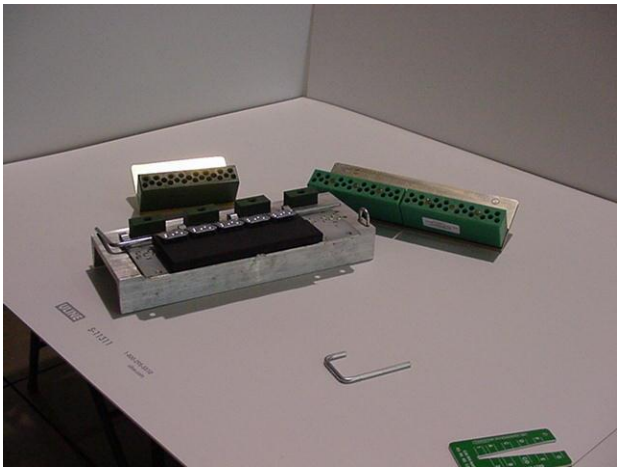

Fig. 9

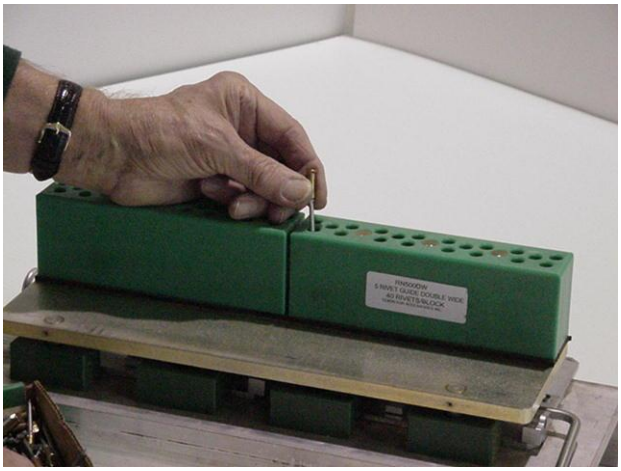

Fig. 10

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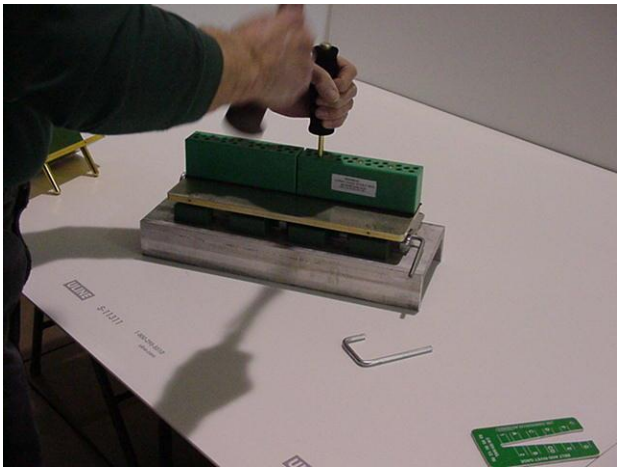
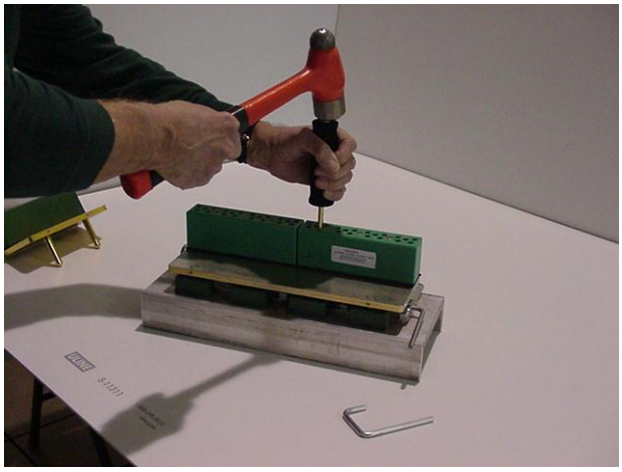


Fig. 11



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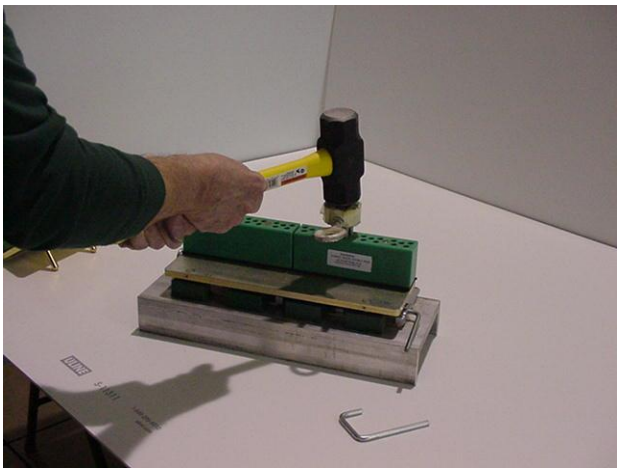


Fig. 13

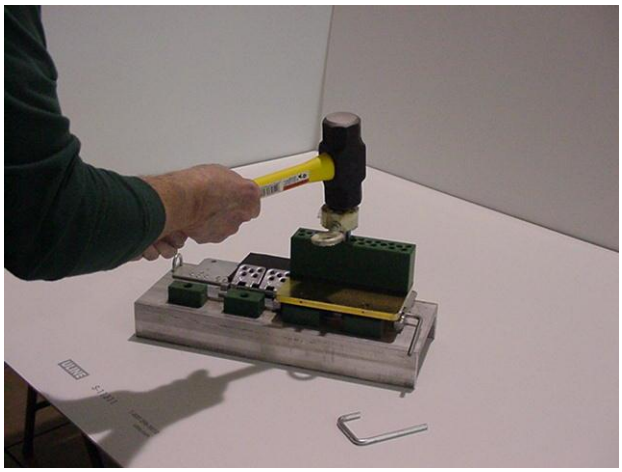


Fig. 14

Fig. 15

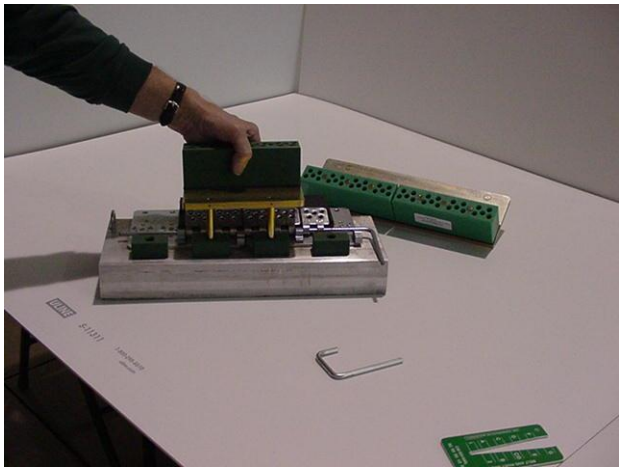


Fig. 16

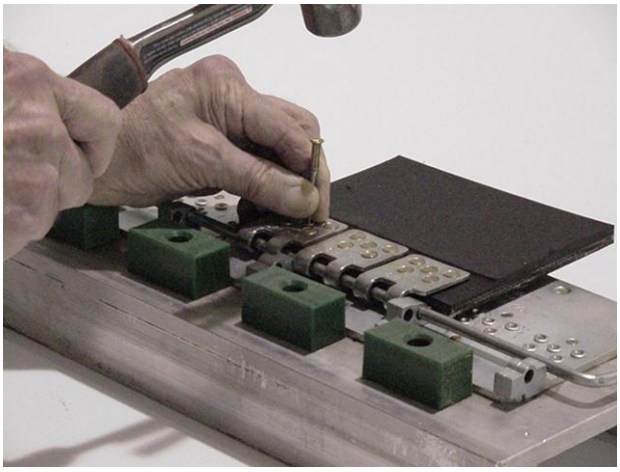
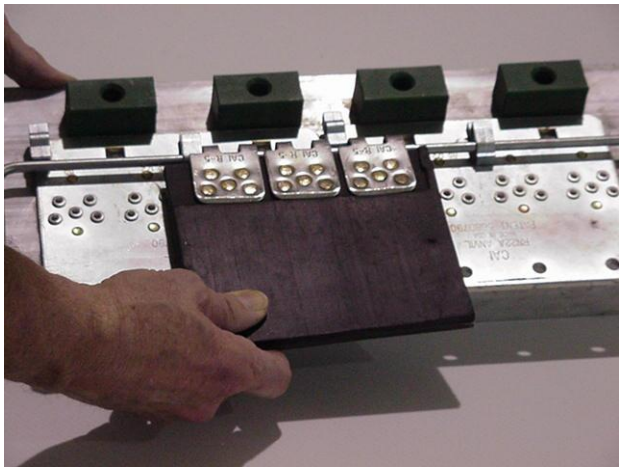


Fig. 17



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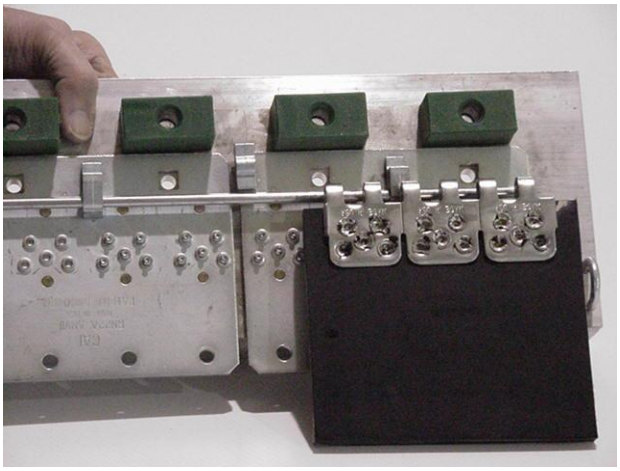

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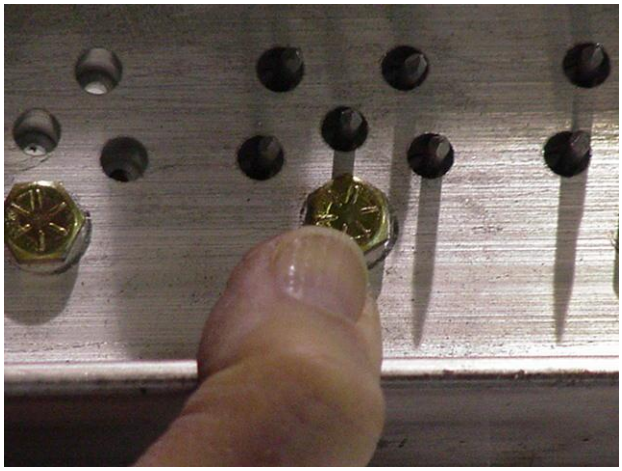

Fig. 20

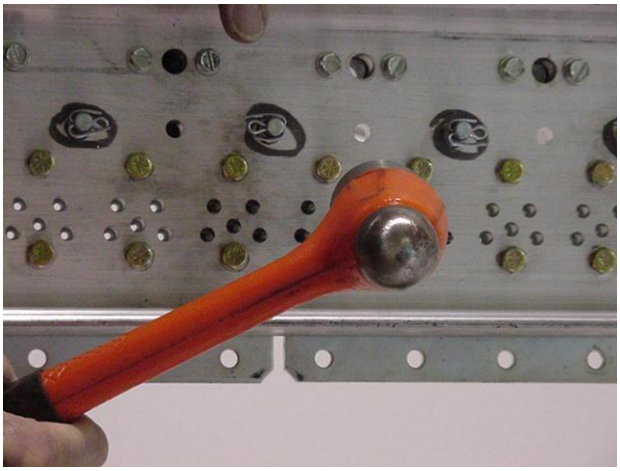

Fig. 21