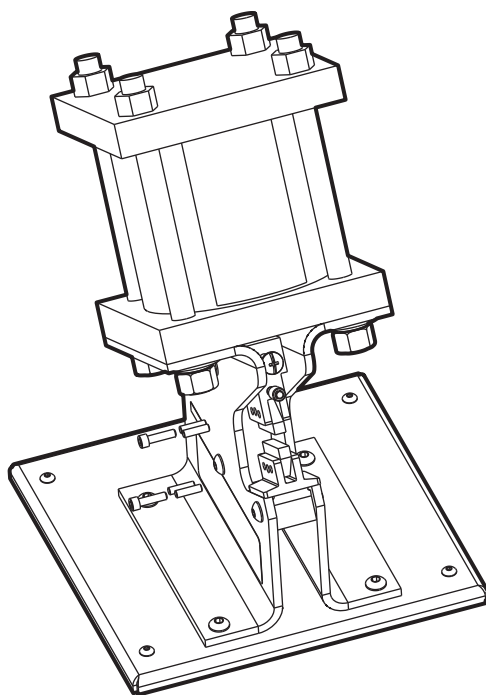


Operating Instructions for BAIR22-6 AIR-POWERED CRIMPING TOOL



Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

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1.1 DESCRIPTION

The BAIR22-6 Air-powered Crimping Tool is a bench mounted, Sta-Kon® crimping tool intended to crimp terminals on 22 AWG through 6 AWG wire using appropriate dies. The complete tool consists of a pneumatic crimping tool, foot switch with Shure Stake® mechanism, and a filter/regulator/lubricator assembly. All connecting hoses are included to operate this tool.

NEVER EXCEED 100 PSI.

1.2 SHURE STAKE® MECHANISM

The Shure Stake® mechanism incorporated in this tool is a pneumatic logic circuit designed to assure that the crimping tool will see a minimum of 80 psi. If air pressure falls below 80 psi, the ram will not retract until full pressure is restored, even if the foot pedal is released.

1.3 SAFETY

Safety is essential in use and maintenance of Thomas & Betts tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

1.4 PURPOSE OF THIS MANUAL

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following Thomas & Betts tool:

BAIR22-6 Air-powered Crimping Tool

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.

1.5 TOOL WARRANTY

WARRANTY: Thomas & Betts sells this product with the understanding that the user will perform all necessary tests to determine the suitability of this product for the user's intended application. Thomas & Betts warrants that this product will be free from defects in materials and workmanship for the period stated on the enclosed warranty card. Upon prompt notification of any warranted defect, Thomas & Betts will, at its option, repair or replace the defective product. Misuse, misapplication or modification of Thomas & Betts products immediately voids all warranties.

Limitations and Exclusions: THE ABOVE WARRANTY IS THE SOLE WARRANTY CONCERNING THIS PRODUCT, AND IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE SPECIFICALLY DISCLAIMED. LIABILITY FOR BREACH OF THE ABOVE WARRANTY IS LIMITED TO COST OF REPAIR OR REPLACEMENT OF THE PRODUCT, AND UNDER NO CIRCUMSTANCES WILL THOMAS & BETTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

1.6 IDENTIFICATION

1. Die Mounting Screws
2. Die Mounting Dowel Pins (As Needed)
3. Brass Lock Screw
4. Spring Loaded, Movable Upper Die Support
5. Fixed Lower Die Support

All specifications are nominal and may change as design improvements occur. Thomas & Betts shall not be liable for damages resulting from misapplication or misuse of its product.

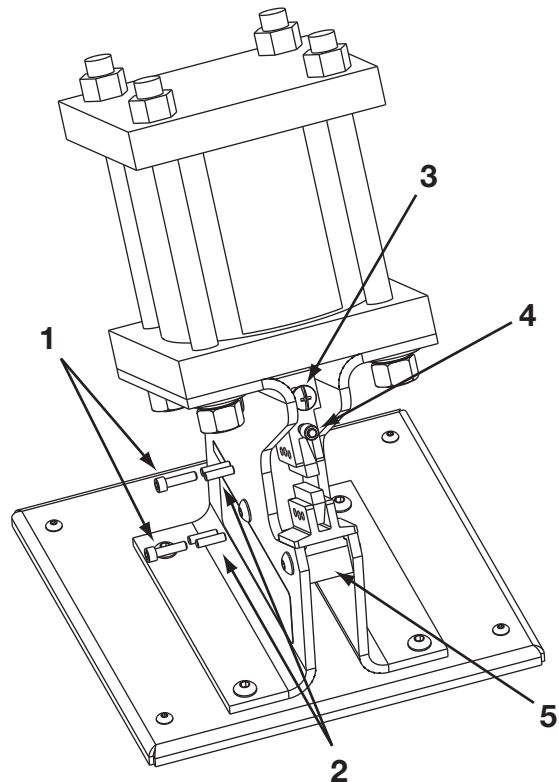


FIGURE 1

1.7 SPECIFICATION**Crimping Tool**

Length.....	12" (305 mm)
Width	8" (203 mm)
Depth	8" (203 mm)
Mass/Weight.....	17 lb (7.9 kg)

Crimping Capacities

Maximum Crimping Force...	1.8 tons@100 psi (16 kn)
Normal Operating Pressure.....	85-90 psi

⚠ WARNING ⚠
NEVER EXCEED 100 PSI

2.1

SAFETY ALERT SYMBOL



This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

! DANGER !

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

! WARNING !

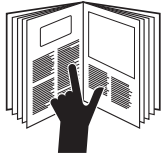
Hazards which, if not avoided, **COULD** result in severe injury or death.

! CAUTION !

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.

2.2

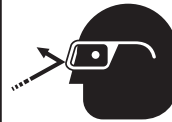
WARNINGS & CAUTIONS



! WARNING !

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning could result in severe injury or death.



! WARNING !

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.



! WARNING !

Electric shock hazard:

This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning could result in severe injury or death.



! WARNING !

Pinch points:

Keep hands away from the crimping head when crimping.

Failure to observe this warning could result in severe injury or death.



! WARNING !

Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.

! WARNING !

An incomplete crimp can cause a fire.

- Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.
- The tool will cycle completely to indicate a successful crimp. If tool does not cycle completely, crimp is unsuccessful.

Failure to observe these warnings could result in severe injury or death.

! CAUTION !

Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe this precaution may result in injury or property damage.

NOTE: Keep all decals clean and legible, and replace when necessary.

3.1 SET UP TOOL

The tool is shipped fully assembled (less dies) with foot switch attached.

1. Remove tool and filter/regulator/lubricator assembly from shipping container.
2. Position the tool on a workbench or table
3. Position the foot switch on the floor.
4. Connect the foot pedal air inlet line to the filter/regulator/lubricator assembly outlet and main air supply to filter/regulator/lubricator assembly inlet.

NOTE: Do not add airline extensions between the foot pedal and filter/regulator/lubricator assembly. This will prevent line pressure drops.

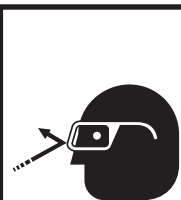
NOTE: Cylinder and pneumatic components are designed to operate without lubrication. If you choose to lubricate, use a quality grade, non-detergent, SAE #10 paraffin base oil. Rate of lubrication should not exceed one drop per 100 crimping cycles.

3.2 DIE INSTALLATION

1. Disconnect air supply
2. Lift spring loaded upper die support to maximum height, and lock in place by tightening brass lock screw.
3. Install die nest into lower support and die indenter into upper die support using screws provided. Screws should be lightly hand tightened at this time.

NOTE: Some dies require use of dowel pins combined with the screws. To properly install these types of dies, remove upper & lower die supports from tool. Place the die supports in a vise. Install the appropriate dies into the supports and install the supplied dowel pins in place along with screws. Re-Install the dies/supports and proceed with step 4.

4. Loosen brass lock screw allowing the spring loaded upper die support to descend so that die indenter and nest will engage and align. Securely tighten screws so that dies will not move within support blocks.
5. Connect air supply.



! WARNING !

Wear eye protection when operating or servicing this tool. Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

3.3 TOOL OPERATION

1. To operate the tool properly, it is essential to depress and hold the foot pedal down until the tool cycles completely. This assures a sustained volume of air in the cylinder at full pressure to complete the crimp.
2. The tool is equipped with a spring loaded upper die support which can be set either in the "up" position permitting the dies to open after every crimp, or in the "down" position allowing the spring loaded upper die support to "hold" the connectors in place prior to and after crimping. For normal use, the "down" position is preferred. To change to "up" operating mode raise upper die support fully and tighten brass lock screw.

3.4 PREPARING CABLE

Follow the terminal manufacturer's instructions for appropriate cable strip length.

! WARNING !

- Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.
- Failure to observe this warning could result in severe injury or death.
- Do not attempt to connect the tool to an energized air line.
- Disconnect tool from air supply when servicing or changing dies.
- Avoid accidental starting. Remove foot from foot switch when not operating the tool.

! CAUTION !

- Do not operate the tool without dies. Damage to the ram or crimping head can result.
- Never exceed 100 psi operating pressure.
- Use this tool for manufacturer's intended purpose only.

Failure to observe these precautions may result in injury or property damage.

3.5

CRIMPING CABLE

1. Insert the properly assembled connector into the crimping head die nest.
2. Depress and hold the foot pedal until tool cycles completely. Repeat Step 2 for the next crimp (see Figure 2).

NOTE: If it is necessary to retract the ram before a crimping cycle is complete, Disconnect air supply.

⚠ WARNING ⚠

An incomplete crimp can cause a fire.

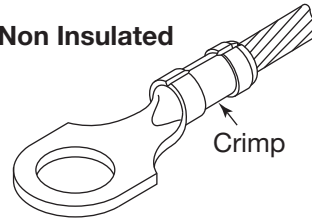
- Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.
- The tool will cycle completely to indicate a successful crimp. If tool does not cycle completely, crimp is unsuccessful.

Failure to observe these warnings could result in severe injury or death.

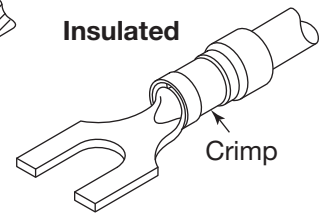
Sta-Kon® Terminals

One crimp required.

Non Insulated



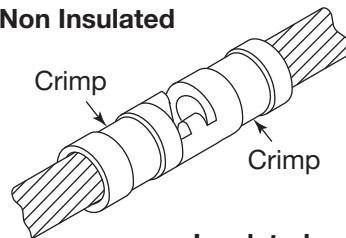
Insulated



Sta-Kon® Splices

Two crimps required, one crimp on each side.

Non Insulated



Insulated

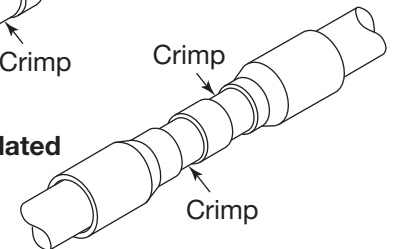


FIGURE 2

4.0

MAINTENANCE

4.1

EACH OPERATING DAY

Before use:

1. Inspect dies for wear or damage such as cracks, gouges, or chips.
2. Inspect the tool for damage or air leaks. If damage is detected, return the tool to an authorized Thomas & Betts service center for inspection, **1-800-284-TOOL** (8665).
3. Ensure all fasteners are properly tightened.
4. Make sure spring loaded upper die holder is free to travel without binding. Lubricate ram if needed. If using tool with the die holder in the "up" position, make sure it is raised fully and locked in place with brass screw.

After use:

1. Wipe all tool surfaces clean with a damp cloth and mild detergent. **IMPORTANT:** See warning located in Step 4.2.

4.2

MONTHLY

Before use:

Thoroughly clean all surfaces.



⚠ WARNING ⚠

Do not use solvents or flammable cleaners to clean the crimping tool body. Solvents could ignite, causing serious injury or property damage.

5.1

TABLE 1

Problem	Probable cause	Probable Remedy
Tool is inoperative.	Insufficient air pressure	Ensure air supply of 85-90 psi to tool.
	Tool components worn or damaged.	Return tool to an authorized Thomas & Betts service center.
Dies stop during operation.	Air pressure has fallen below 80 psi.	Increase air supply. Press foot pedal to complete stroke.
	Tool component worn or damaged.	Return tool to an authorized Thomas & Betts service center.

For parts or service, contact Thomas & Betts tool service center at 1-800-284-TOOL (8665).

6.0

CALIBRATION VERIFICATION

6.1

SAFETY

NOTE: Calibration verification procedure should be performed whenever the tool is damaged or damage is suspected.



WARNING

This tool is equipped with the SHURE STAKE® full stroke compelling mechanism. Keep fingers clear of die nest during gaging procedure.

6.2

VISUAL INSPECTION

Tool must be free of cracks, sharp edges and other obvious imperfections that may affect performance of the tool. Nest area must be free of burrs, dents or scratches.

6.3

GAGING PROCEDURE

NOTE: Wipe die nest before gaging.

1. Cycle tool until dies bottom.
2. Using gage pins, insure that each nest meets the gaging requirements as specified in TABLE 2, 3, 4, 5, or 6 per the corresponding die.

UPON SUCCESSFUL COMPLETION OF THE ABOVE PROCEDURE, THE PREVIOUS CALIBRATION OF THE TOOL IS VERIFIED

NOTE: If tool fails any of the above tests, do not attempt repair or adjustment. Call the nearest Thomas & Betts Tool Service Center to arrange for repair service. Any change, modification or alteration of the tool or use by the customer in a manner other than as specified by Thomas & Betts shall void all warranties express or implied and the customer shall, therefore, assume all liability for any damage or injury caused by said change, modified or altered tool or improper usage or such tool.

6.4

GAGING TABLES

TABLE 2

DIE2001 GAGING REQUIREMENTS		
NEST	GAGING MIN. - MAX.	WIRE SIZE
RED	.100 - .103	#22 - #18 AWG
BLUE	.117 - .120	#16 - #14 AWG
YELLOW	.149 - .152	#12 - #10 AWG

TABLE 3

DIE2002 GAGING REQUIREMENTS		
NEST	GAGING MIN. - MAX.	WIRE SIZE
A	.062 - .067	#22 - #18 AWG
B	.084 - .089	#16 - #14 AWG
C	.110 - .115	#12 - #10 AWG

TABLE 4

DIE2007 GAGING REQUIREMENTS		
NEST	GAGING MIN. - MAX.	WIRE SIZE
RED	.190 - .196	8 AWG
BLUE	.212 - .218	6 AWG

TABLE 5

DIE2500 GAGING REQUIREMENTS		
NEST	GAGING MIN. - MAX.	WIRE SIZE
RED	.080 - .088	#22 - #18 AWG
BLUE	.091 - .099	#16 - #14 AWG
YELLOW	.119 - .127	#12 - #10 AWG

TABLE 6

DIE2005 GAGING REQUIREMENTS		
NEST	GAGING MIN. - MAX.	WIRE SIZE
B	.083 - .089	#16 - #14 AWG
C	.118 - .124	#12 - #10 AWG
D-E	.176 - .181	#8 - #6 AWG