

PBT1100 POWER BANDING TOOL

DMC DANIELS
MANUFACTURING
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DATASHEET

INTRODUCTION:

The Daniels PBT1100 Power Banding tool is designed to terminate EMI/RFI shielding materials using M85049/128-01 and M85049/128-02 1/4 inch welded-buckle bands or equivalent. This tool is made up of two parts; a control box and the tool itself interconnected with a coiled hose.

1.0 **OPERATION:** In order to operate the tool properly, use the following steps:

- 1.1 Plug the PBT1100 Control Box into an air supply between 90-120 psi. The indicator on the Control Box will rise to the green area (see Figure 1). If the indicator is not in the green area please check tool calibration and adjust as described in Section 2.0.
- 1.2 Position the connector and shield assembly through the band, making sure the connector is on the left side of the tool.
- 1.3 Activate and hold down the finger press in order to allow the shuttle assembly to move forward. While holding the finger press, insert the band into the nose of the tool with the band loop oriented on the upper side of the nose (see Figure 2). Release the finger press to allow the shuttle assembly to move back to its original position, ensuring that the band has been captured by the gripping mechanism.
- 1.4 Orient the shield terminations under the band while depressing and releasing the finger press. This allows the shuttle assembly to move fully forward and rearward pulling up the band. Continue to depress and release the finger press until the band pulls tight **and the shuttle assembly does not come fully rearward.**
- 1.5 To complete the termination, the band must be bent 90° by lifting the cutter lever upward and then cutting it by depressing the lever downward (see Figure 3).

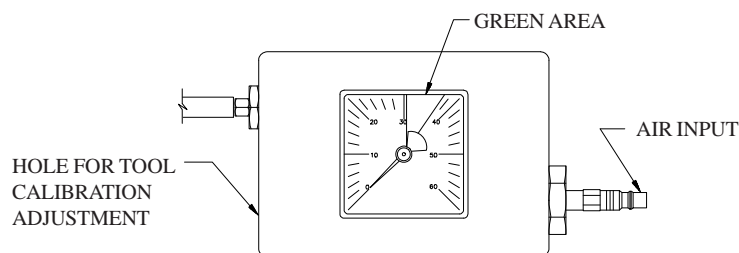


FIGURE 1

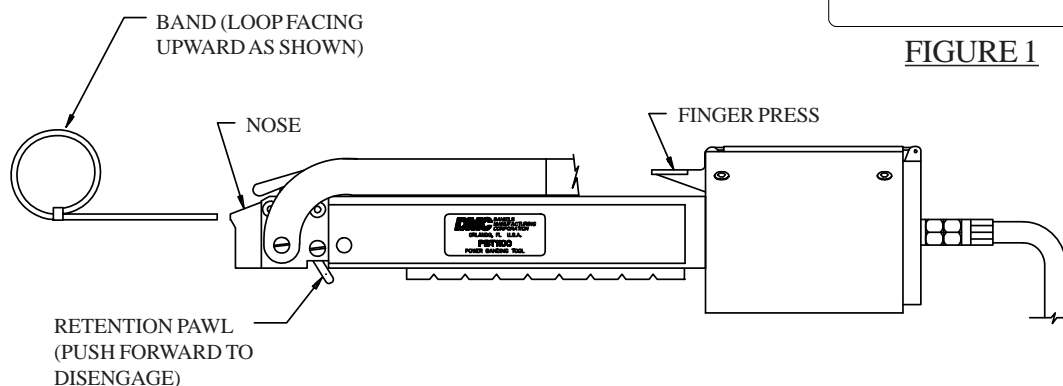


FIGURE 2

SEE PAGE 4 FOR LIMITATIONS ON LIABILITY AND LIMITED WARRANTY

DANIELS MANUFACTURING CORP., 526 THORPE ROAD, ORLANDO, FL 32824, USA
PHONE (407) 855-6161 • FAX (407) 855-6884 • WWW.DMCTOOLS.COM • E-MAIL: DMC@DMCTOOLS.COM

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- 1.6 The band may be loosened or removed at any point in the operation by depressing the finger press and holding down while disengaging the retention pawl. When disengaging the retention pawl, apply force on the band away from the tool to remove or loosen the band. **This procedure may be simplified if the finger press is depressed and the control box is disconnected from the air supply. The finger press may then be released which leaves both hands free to disengage the retention pawl and to pull on the band.**
- 1.7 The cutoff tab must be rolled over 180° in a manner which will prevent slippage. **The DBS-R03 Rollover Tool may be used for this purpose.**
- 1.8 Remove excess band material from the tool by grasping and pulling the spent band through the shuttle. The action may be assisted by pulling the band while depressing the finger press.

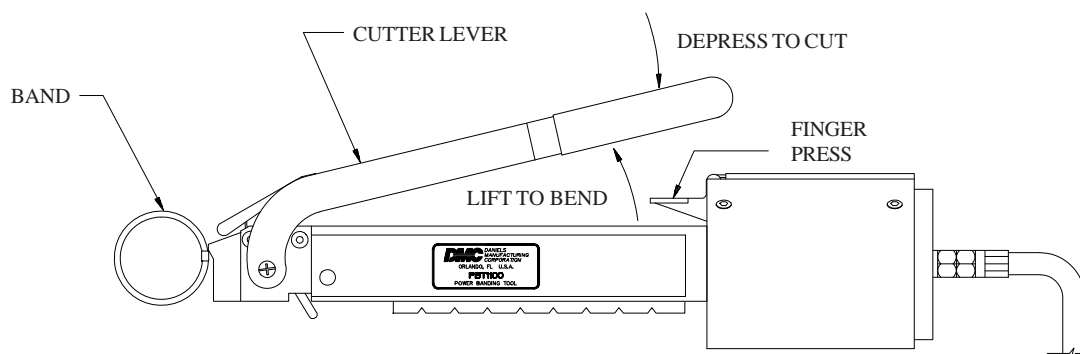


FIGURE 3

2.0 TOOL CALIBRATION:

2.1 CHECKING TOOL CALIBRATION

- 2.1.1 Place the calibration inspection fixture (DBS-CG2) and the power banding tool (PBT1100) so that they may be oriented as shown in Figure 4.
- 2.1.2 Insert a flat band through the band insertion slot of the calibration inspection fixture until it extends completely through the fixture and the band buckle is resting against the backstop.
- 2.1.3 Insert the band into the nose of the banding tool as describe in Paragraph 1.3
- 2.1.4 Repeatedly actuate the finger press until the band pulls tight and the shuttle assembly does not come fully rearward.
- 2.1.5 Insert the "Go" member of the "Go/No-Go" gage into the gage verification slot of the calibration inspection fixture. If the "Go" member does not insert freely, the tool is exerting excessive force. Likewise, if the "No-Go" member freely enters the gage verification slot, the tool is below the minimum force limit. If calibration is required, see Section 2.2.
- 2.1.6 To separate, actuate the cutter lever.
- 2.1.7 Remove spent band pieces from both the calibration inspection fixture and the banding tool.

2.2 ADJUSTING TOOL CALIBRATION (DBS-CG2)

- 2.2.1 Set the supply air pressure between 90-120 psi.
- 2.2.2 Set the tool to the DBS-CG2 gage as in 2.1 above where the tension value of the tool can be noted using the "Go/No-Go" gage.

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- 2.2.3 Using a blade screwdriver, insert through the hole in the side of the control box (see Figure 1) and rotate until it engages the slot in the air regulator adjustment knob. Rotate the knob of the regulator clockwise to increase the tension reading and counterclockwise to decrease the reading until the desired readings are attained to meet calibration requirements of Paragraph 2.1.5. **(Note: If the control box gage indicating needle does not fall within the green banded area, the PBT1100 should be returned to DMC for repair and recalibration).**
- 2.2.4 Depress and release the finger press of the tool to verify the reading. Readjust as necessary. Release the gage as described in Paragraphs 2.1.6 & 2.1.7.

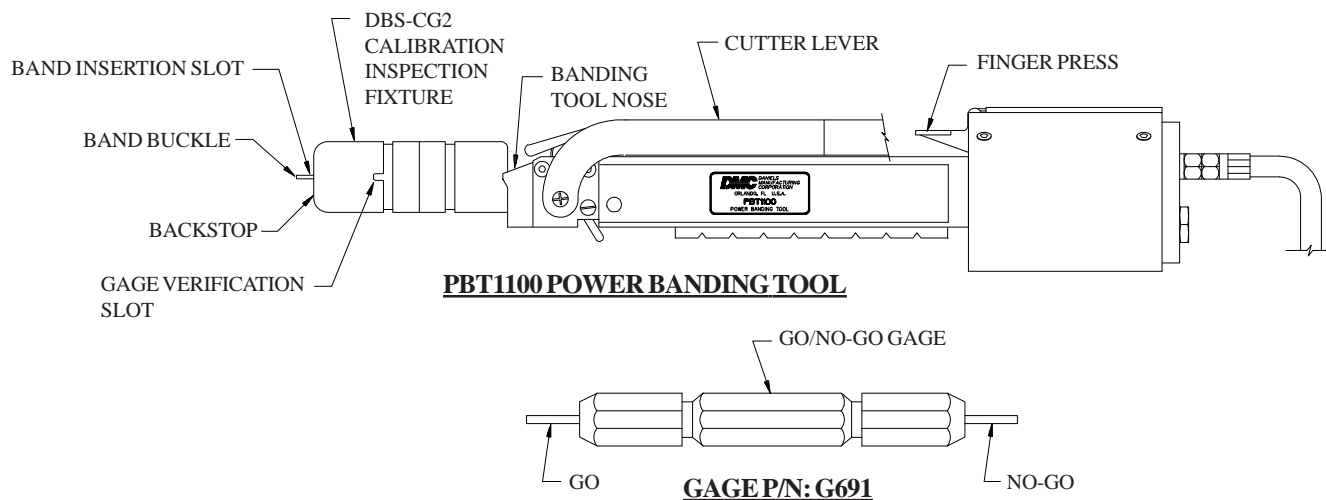


FIGURE 4

2.3 ALTERNATE METHOD TO CHECK AND ADJUST PBT1100 CALIBRATION (DBS-CG1)

- 2.3.1 Place the banding tool calibration fixture (P/N DBS-CG1) in a position where the dial of the gage is facing the operator as shown in Figure 5.
- 2.3.2 Place the cam handle in the locked position.
- 2.3.3 Ensure that the adaptor insert marked "-15" for PBT1100 is installed in the fixture.
- 2.3.4 Insert a piece of unused banding material 3 to 4 inches long through the adaptor plate until it passes beyond the teeth of the gripper jaws and stop. Check engagement of band by pulling on it a few times.
- 2.3.5 Insert the other end of the band into the nose of the banding tool until engaged.
- 2.3.6 Repeatedly actuate the finger press of the tool until the band pulls tight and the shuttle assembly of the tool does not come fully rearward.
- 2.3.7 Read the position of the indicating needle on the gage. This value represents the maximum tension in pounds of the tool for that pull. Tool calibration should be 140 lbs. minimum
- 2.3.8 Should the tool calibration not be correct, verify that the supply air pressure is 90 psi or higher. If supply pressure is below 90 psi, increase to a minimum of 90 psi and recheck gage indicating needle of DBS-CG1.

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- 2.3.9 If the gage indicating needle still reads below the 140 lbs. value, insert a blade screwdriver through the hole in the side of the control box (see Figure 1) and rotate until it engages the slot in the air regulator knob. Rotate the knob clockwise to increase the tension reading to about 150 lbs.
- 2.3.10 Depress and release the finger press to verify the reading. Readjust as necessary. **NOTE: If the control box gage indicating needle does not fall within the green area at the 150 lbs. adjustment, the PBT1100 tool should be return to DMC for repair and recalibration.)**
- 2.3.11 Release the pressure of the gage by slowly moving the cam handle to the release position allowing the gage needle to return to zero.
- 2.3.12 Push the gripper jaws cam lever clockwise, then pull the band from the calibration fixture. The band may now be removed from the tool.

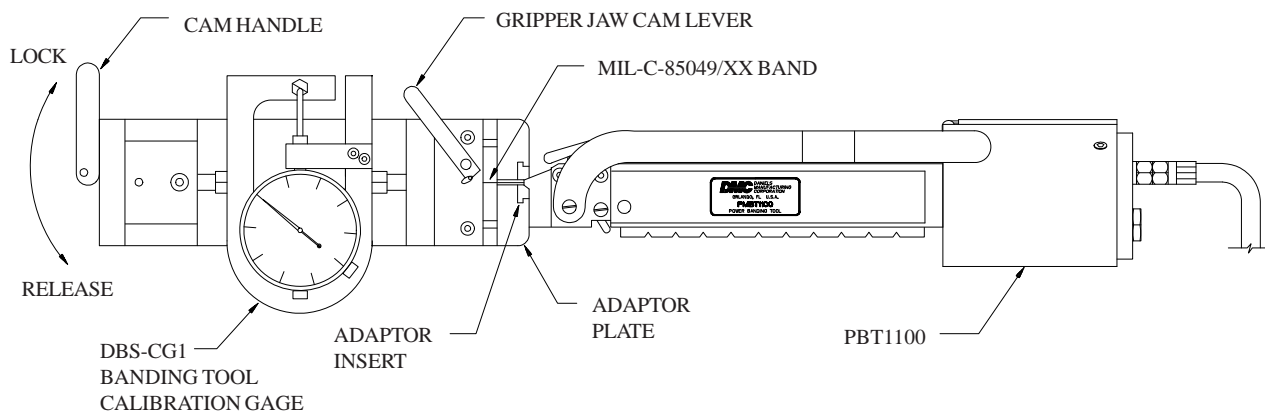


FIGURE 5

LIMITATION OF LIABILITY / LIMITED WARRANTY*

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*as defined by PL93-637

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