



ALLEN-BRADLEY 1336 PLUS and 1336 FORCE Lug Kits

Installation Data

Cat. Nos. 1336-LUG-A/Q040, -A/Q050, -A/Q060, -B/R060, -B/R075, -B/R100, -B/R125, -BRX150, -C/W075, -C/W100 and -C/W125

What This Data Provides

This installation data conveys to qualified personnel the appropriate 1336 PLUS and 1336 FORCE Drive Lug Kits and necessary size lugs to use for R (L1), S (L2) and T (L3) power input wire terminations, U (M1), V (M2) and W (M3) motor output wire terminations, DC+ Brake and DC- Brake Terminations on Standard Drives, DC+ and DC- Terminations on Common Bus Drives, PE (power ground) and TE (signal ground) wire terminations.

Where These Kits Are Used

1336 PLUS and 1336 FORCE Drive Lug Kits are used on drives rated from 40 to 150 HP (11 to 30 kw) including: Models A/Q040, A/Q050, A/Q060, B/R060, B/R075, B/R100, B/R125, BRX150, C/W075, C/W100 and C/W125. The (A), (B), (C), (Q), (R) or (W) in the Catalog Number defines the voltage rating. The Lug Kits are designed for use with AC line or common DC bus input drives. Read appropriate notes at the bottom of the tables.



ATTENTION: 1336 PLUS and 1336 FORCE Drive Lug Kits can only be used with copper wires. Use of aluminum wires will cause equipment damage and create a fire hazard.

What These Kits Contain

Each kit contains:

- A quantity of 11 to 13 lugs to match the five (5) categories of Termination Blocks. There are lugs provided in each kit to cover all combinations of lugs needed for the group of 4 drives that each Lug Kit supports. Therefore, depending on which drive the Lug Kit is being used on, all lugs provided may or may not be used.

Tools Required

The following tools are needed to prepare wires and install Lug Kit:

- Thomas and Betts WT117 or TBM-6 Crimper Tool (for all lugs except the 10 AWG lugs for DC+ Brake and DC- Brake terminations in the 1336-LUG-BR060 Lug Kit)
- M8 Metric Deep-well Socket and Drive Wrench
- Wire Stripper

Spare Allen Bradley Parts

Description

This 1336 PLUS and 1336 FORCE Drive Lug Kit Publication provides information on the number of lugs required to terminate appropriately sized wiring on Allen-Bradley UL and/or CSA certified drives. Always reference the AWG size stamped on the lug.



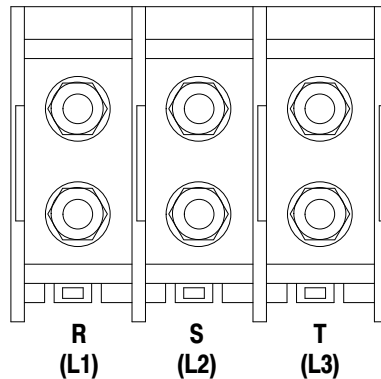
ATTENTION: The National Electrical Code (NEC) and local codes outline provisions for safely installing electrical equipment. Installation must comply with specifications regarding wire types, conductor sizes, branch circuit protection and disconnect devices. Failure to do so may result in personal injury and/or equipment damage.

Installation

Using the information provided in Table A through Table E, select the proper Lug Kit for the appropriate application.

Table A-1

Drive Input R (L1), S (L2) and T (L3) Terminals Located on a Standard A, B, or C Drive.



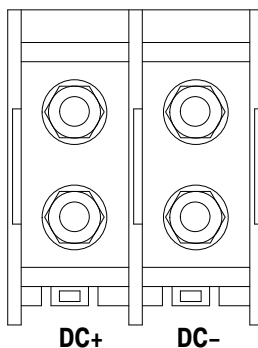
A-B CATALOG NUMBER ❶ 1336-LUG-	A, B, or C STANDARD DRIVE INPUT AMPERES	INPUT R, S and T (L1, L2 and L3) MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❷ ±1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	119	53.5 (1/0)	3	17.1 (0.672)	11808	11802
AQ050	149	85 (3/0)		21.8 (0.859)	11809	
AQ060	178	107.2 (4/0)		21.8 (0.859)	11810	
BR060	93	42.4 (1)		16.3 (0.641)	11806	
BR075	119	53.5 (1/0)		17.1 (0.672)	11807	
BR100	149	85 (3/0)		21.8 (0.859)	11809	
BR125	178	107.2 (4/0)		21.8 (0.859)	11810	
BRX150	178	107.2 (4/0)		21.8 (0.859)	11810	
CW075	84	33.6 (2)		16.3 (0.641)	11806	
CW100	108	53.5 (1/0)		17.1 (0.672)	11807	
CW125	137	67.4 (2/0)		18.6 (0.734)	11808	

❶ For standard A, B or C Drives, use Table A-1 for input lugs. For common bus type W, R and Q Drives, use Table A-2 for input lugs.

❷ All dimensions in MM (IN.)

Using the information provided in [Table A](#) through [Table E](#), select the proper Lug Kit for the appropriate application.

Table A-2
Drive Input DC+ and DC- Terminals Located on a Common Bus Q, R, or W Drive.



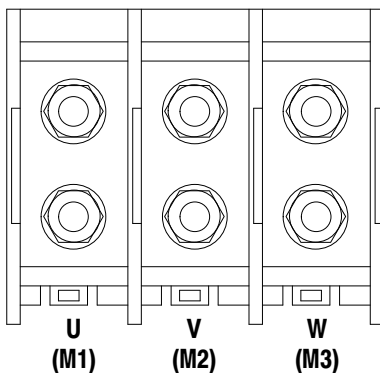
A-B CATALOG NUMBER ❶ 1336-LUG-	Q, R, or W COMMON BUS DRIVE INPUT AMPERES	INPUT MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❷ ±1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	131	67.4 (2/0)	2	18.6 (0.734)	11808	11802
AQ050	164	107.2 (4/0)		21.8 (0.859)	11810	
AQ060	197	127 (250mcm)		28.6 (1.125)	13476	13473
BR060	105	53.5 (1/0)		16.3 (0.641)	11806	11802
BR075	131	67.4 (2/0)		17.1 (0.672)	11807	
BR100	164	107.2 (4/0)		21.8 (0.859)	11810	
BR125	197	127 (250mcm)		28.6 (1.125)	13476	13473
BRX150	197	127 (250mcm)		28.6 (1.125)	13476	
CW075	96	42.4 (1)		16.3 (0.641)	11806	11802
CW100	123	67.4 (2/0)		18.6 (0.734)	11808	
CW125	156	85 (3/0)		21.8 (0.859)	11810	

❶ For standard A, B or C Drives, use Table A-1 for input lugs. For common bus type W, R and Q Drives, use Table A-2 for input lugs.

❷ All dimensions in MM (IN.)

Installation (Continued)

Table B
Drive Output U (M1), V(M2) and W(M3) Lug

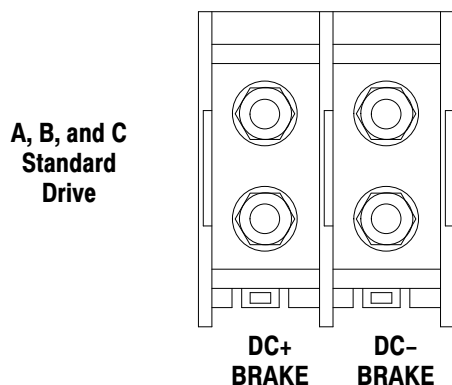


A-B CATALOG NUMBER 1336-LUG-	MOTOR OUTPUT AMPERES	OUTPUT U, V and W (M1, M2 and M3) MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❶ ± 1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	120	53.5 (1/0)	3	17.1 (0.672)	11807	11802
AQ050	150	85 (3/0)		21.8 (0.859)	11809	
AQ060	180	107.2 (4/0)		21.8 (0.859)	11810	
BR060	96	42.4 (1)		16.3 (0.641)	11806	
BR075	120	53.5 (1/0)		17.1 (0.672)	11807	
BR100	150	85 (3/0)		21.8 (0.859)	11809	
BR125	180	107.2 (4/0)		21.8 (0.859))	11810	
BRX150	180	107.2 (4/0)		21.8 (0.859)	11810	
CW075	85	33.6 (2)		16.3 (0.641)	11806	
CW100	109	53.5 (1/0)		17.1 (0.672)	11807	
CW125	138	67.4 (2/0)		18.6 (0.734)	11808	

❶ All dimensions in MM (IN.)

Installation (Continued)

Table C
Dynamic Brake Connection Lug

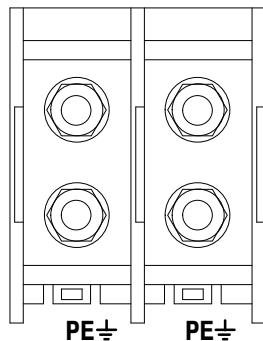


A-B CATALOG NUMBER ❶ 1336-LUG-	DC+ and DC- MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❷ ± 1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	13.3 (6)	2	11.9 (0.469)	11803	11802
AQ050	13.3 (6)		11.9 (0.469)	11803	11802
AQ060	13.3 (6)		11.9 (0.469)	11803	11802
BR060	5.3 (10)		7.9 (0.312)	❸	❸
BR075	13.3 (6)		11.9 (0.469)	11803	11802
BR100	13.3 (6)		11.9 (0.469)	11803	11802
BR125	26.7 (3)		12.7 (0.500)	11805	11802
BRX150	26.7 (3)		12.7 (0.500)	11805	11802
CW075	13.3 (6)		11.9 (0.469)	11803	11802
CW100	13.3 (6)		11.9 (0.469)	11803	11802
CW125	26.7 (3)		12.7 (0.500)	11805	11802

- ❶ For common bus type W, R and Q Drives, the brake wiring lugs are not used.
- ❷ All dimensions in MM (IN.)
- ❸ For 10 AWG Dynamic Brake Lug, Thomas and Betts Tool WT11M must be used.

Installation (Continued)

Table D
PE (Power Ground) Connection Lug



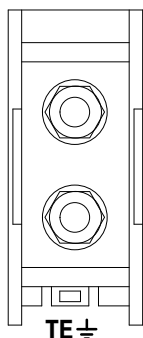
A-B CATALOG NUMBER 1336-LUG	PE (Power Ground) MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❶ ± 1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	53.5 (1/0)	2	17.1 (0.672)	11807	11802
AQ050	85 (3/0)		21.8 (0.859)	11809	
AQ060	107.2 (4/0)		21.8 (0.859)	11810	
BR060	42.4 (1)		16.3 (0.641)	11806	
BR075	53.5 (1/0)		17.1 (0.672)	11807	
BR100	85 (3/0)		21.8 (0.859)	11809	
BR125	107.2 (4/0)		21.8 (0.859))	11810	
BRX150	107.2 (4/0)		21.8 (0.859)	11810	
CW075	33.6 (2)		16.3 (0.641)	11806	
CW100	53.5 (1/0)		17.1 (0.672)	11807	
CW125	67.4 (2/0)		18.6 (0.734)	11808	

❶ All dimensions in MM (IN.)

❷ There are 2 Power Ground Terminations provided, one for power input grounding, one for motor output grounding.

Installation (Continued)

Table E
TE (Signal Ground) Connection Lug



A-B CATALOG NUMBER 1336-LUG-	PE (Power Ground) MM ² (AWG) LUG SIZE	LUG QTY.	STRIP LENGTHS ❶ ± 1.6 MM (0.062")	T and B WT117 or TBM-6 TOOL NEST	T and B WT117 or TBM-6 TOOL INDENTOR
AQ040	13.3 (6)	1	11.9 (0.469)	11803	11802
AQ050	13.3 (6)		11.9 (0.469)	11803	
AQ060	21.2 (4)		12.7 (0.500)	11805	
BR060	13.3 (6)		11.9 (0.469)	11803	
BR075	13.3 (6)		11.9 (0.469)	11803	
BR100	13.3 (6)		11.9 (0.469)	11803	
BR125	21.2 (4)		12.7 (0.500)	11805	
BRX150	21.2 (4)		12.7 (0.500)	11805	
CW075	8.4 (8)		11.9 (0.469)	11803	
CW100	13.3 (6)		11.9 (0.469)	11803	
CW125	13.3 (6)		11.9 (0.469)	11803	

❶ All dimensions in MM (IN.)

The following procedure describes the steps you must follow to properly install lugs.



ATTENTION: Open and lock-out main supply disconnect and all other power source disconnects to avoid the hazard of electrical shock or injury from unintended activation of control equipment.

Step 1 Remove power to the drive.

Step 2 Strip insulation and prepare end(s) of wire(s).

Step 3 Use the recommended Compression Tool instructions on next page and carefully crimp the appropriate lug on the wire. Repeat this process for all remaining lugs/wires.

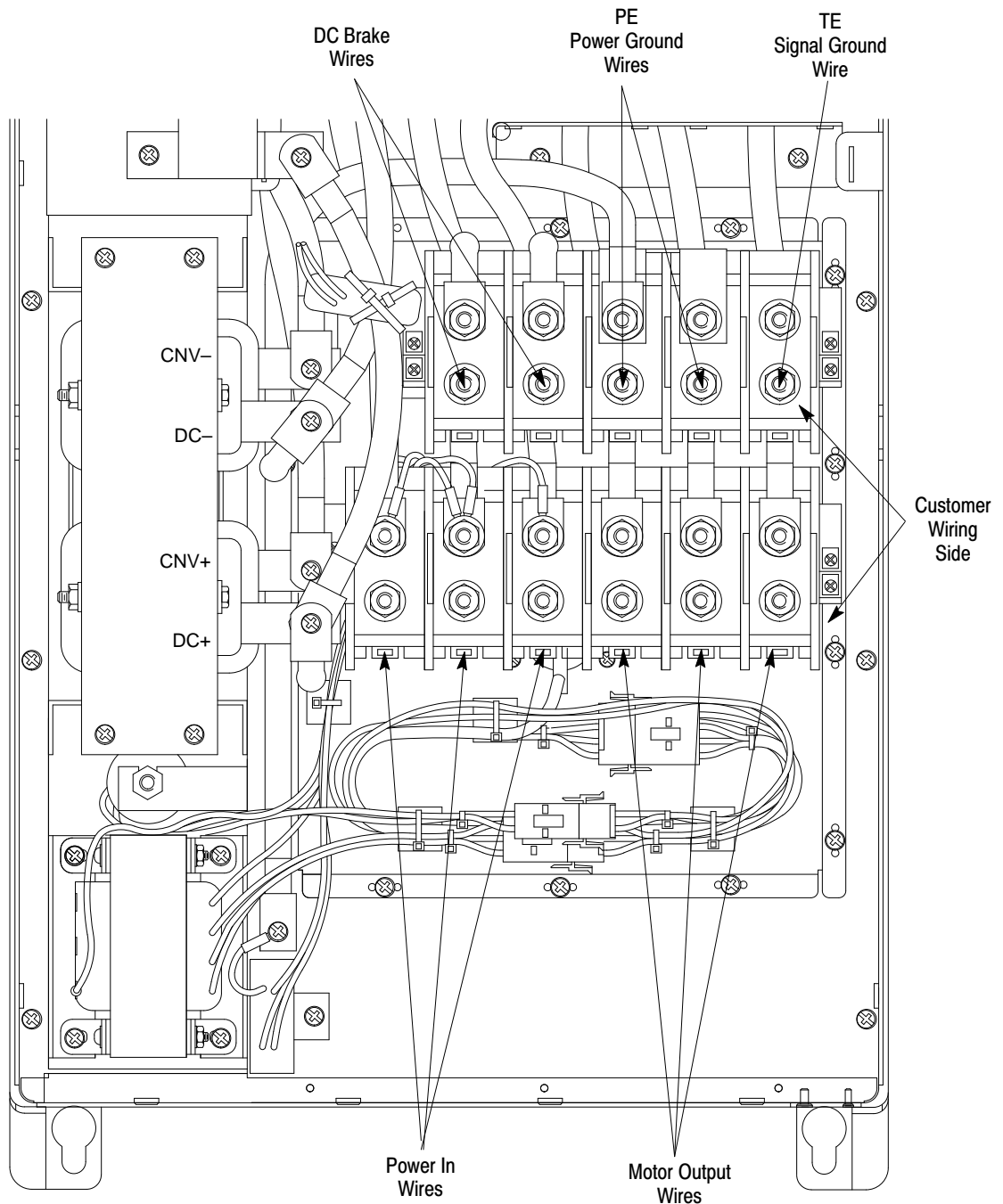
Step 4 Use the screws/bolts supplied with the contactor to connect lugs to the appropriate terminals (shown in Figure 1). Tighten the screws/bolts with a torque of 6 N-m (52 in-lb).

Installation (Continued)



ATTENTION: Hazard of short circuit and equipment damage exists. All exposed wire must be secured in the barrel of the lug.

Figure 1
Typical Standard Drive Control Assembly Wire Termination Detail

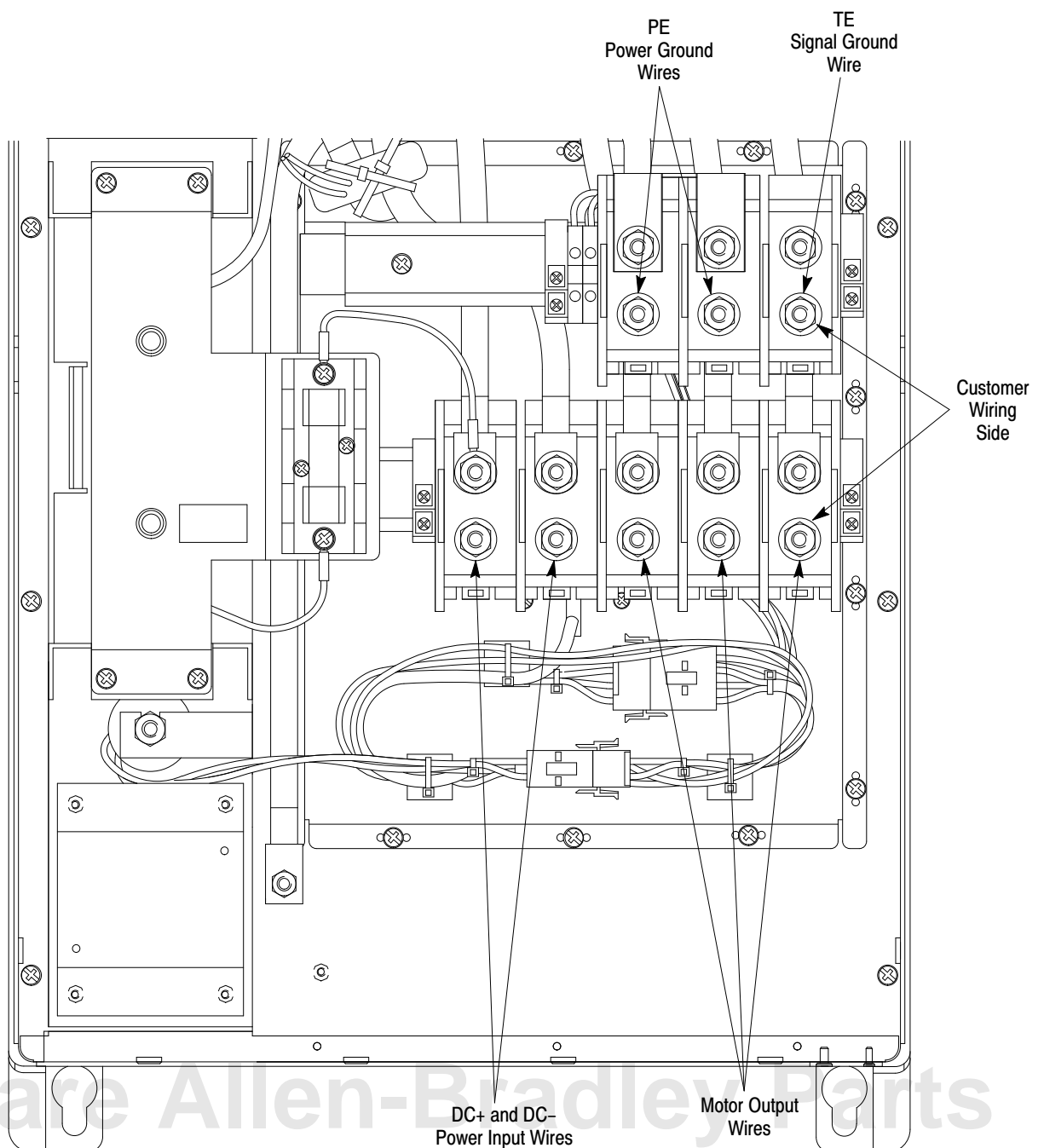


Installation (Continued)



ATTENTION: Hazard of short circuit and equipment damage exists. All exposed wire must be secured in the barrel of the lug.

Figure 2
Typical Common Bus Drive Control Assembly Wire Termination Detail



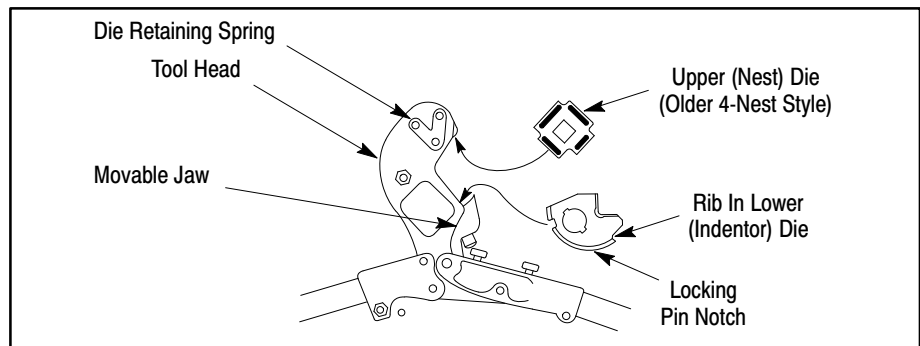
Compression Tool Instructions

The following instructions, for the Thomas and Betts Corporation STA-KON[®] Compression Tool (Models WT117 or TBM-6), are provided with their permission.

How to Install or Change Dies (Figure 3)

- Step 1** Hold the tool with the die retaining spring facing you and open handles of tool until they are fully extended.
- Step 2** Hold the upper die with the crimping nest facing toward the movable jaw. Then insert the upper die under the die retaining spring in the tool head. The die retaining spring will hold the die by applying pressure against the die locator pin.
- Step 3** Properly position and hold the lower die (indenter) with its rib facing downward and the locking pin notch to the right. Then slip the rib of the lower die into the groove in the movable jaw. Push the lower die into the movable jaw until the die is properly seated and the locking pin snaps into the notch.

Figure 3
Thomas and Betts Corporation STA-KON[®] Compression Tool (Model WT117 or TBM-6) with SHURE STAKE[®] Feature



How to Remove Dies (Figure 3)

- Step 1** Hold the tool with the die retaining spring facing you and open handles of tool until they are fully extended.
- Step 2** Pull the locking pin all the way down, disengaging it from the lower die. Then slip the die along the groove until it is out of the movable jaw.
- Step 3** Pull the upper die out from under the die retaining spring and remove it from the tool head.

Compression Tool Instructions (Continued)

When to Calibrate Tool

IMPORTANT: The calibration verification procedure should be performed at least every 30 operating days and whenever damage or suspected damage has occurred or as often as operating conditions warrant. The SHURE STAKE[®] feature prevents opening of the handles until full staking action is completed, making a correct compression every time.



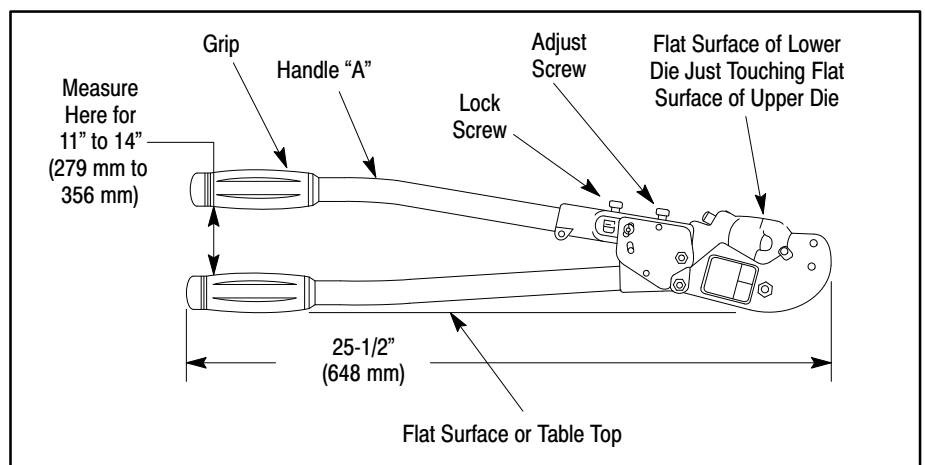
ATTENTION: This tool is equipped with a SHURE STAKE[®] full stroke compelling mechanism. Keep fingers clear of die nests during gaging procedure.

When to Adjust Tool

To insure the tool will produce a reliable crimp, the tool must be properly adjusted at all times.

How to Check Tool Adjustment (Figure 4)

Figure 4
Thomas and Betts Corporation STA-KON[®] Compression Tool
Adjustment Detail



Compression Tool Instructions (Continued)

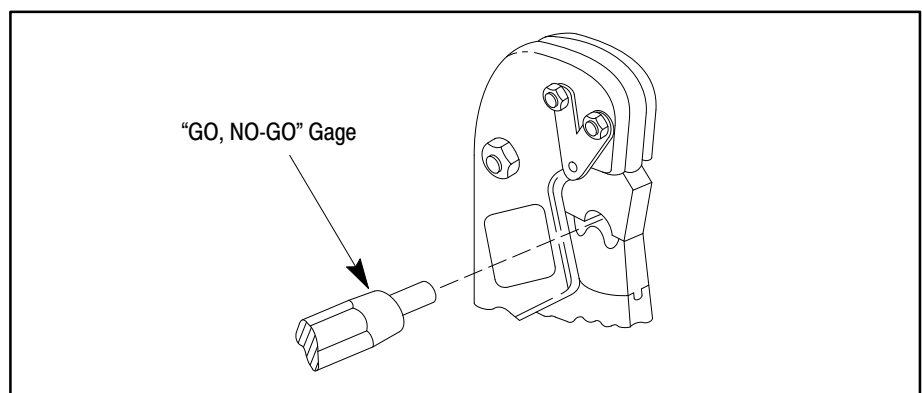
- Step 1** Install the correct set (upper nest and lower indenter) dies in place to be used in the tool.
- Step 2** Lay the tool on a flat surface as shown. Open handle “A” and release it so that it will close of its own weight. This will overcome any slack in tool.
- Step 3** Measure the handle spread distance at the inner surface of the handle tips as shown.
- Step 4** If the distance is between 11” and 14” (279 mm and 356 mm), the tool is adjusted properly. If not, the tool should be readjusted.

How to Adjust Tool (Figure 4)

- Step 1** Loosen lock screw.
- Step 2** To increase the distance between handles, turn adjust screw clockwise. To decrease distance between handles, turn adjust screw counterclockwise.
- Step 3** Re-tighten lock screw when the proper distance between handles is achieved.

Tool Gaging Procedure (Figure 5)

Figure 5
Thomas and Betts Corporation STA-KON® Compression Tool
“GO, NO-GO” Adjustment Detail



Compression Tool Instructions (Continued)

IMPORTANT: Wipe and clean off dies before gaging.

Step 1 Squeeze handles until jaws are fully closed.

Step 2 Select the corresponding “GO, NO-GO” gage (see Table F).

Step 3 While holding handles tightly closed, insert the appropriate “GO, NO-GO” gage into the nest. GO gage should enter freely. NO-GO gage should not enter.

IMPORTANT: Upon successful completion of the preceding calibration, the tool is verified. If the tool malfunctions any of the above “GO, NO-GO” tests, do not attempt repair or adjustment. Contact your nearest Thomas and Betts repair center for service advisement. Any change, modification or alteration of the tool or use by the customer in a manner other than as specified by Thomas and Betts, shall void all warranties, expressed or implied, and the customer shall, therefore, assume all liability for any damage or injury caused by said changed, modified or altered tool or improper usage of such tool.

Table F
Thomas and Betts “GO, NO-GO” Gage Selection

“GO, NO-GO” GAGE PART NUMBER	UPPER DIE (NEST) PART NUMBER	GAGING + 0.010	LUG SIZE
683-G-1207	11803	0.152	D
683-G-1208	11805	0.187	E
683-G-1209	11806	0.206	F
683-G-1209	11806	0.206	G
683-G-1210	11807	0.234	H
683-G-1211	11808	0.272	J
683-G-1212	11809	0.250	K
683-G-1213	11810	0.266	L

How to Make a Compression

Step 1 Insert bared conductor into connector/lug.

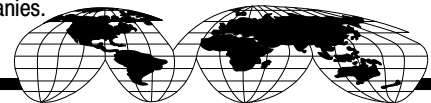
Step 2 Position connector/lug in die grooves of tool until the die is between the compression bands on the connector/lug.

Step 3 Close handles of tool completely.



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