

SAH
FIRST CLASS MAIL

Installation Engineering Handbook 18
Western Electric Company, Incorporated
Kearny Works

T. I. Section 7G
11-30-70

TEMPORARY INSTRUCTION
CONNECTING COMPRESSION TOOLS
AND COMPRESSION CONNECTIONS

1. GENERAL

1.1 It has been reported that a number of KS-15977 aluminum lugs were attached to wire ends by other than approved methods. Some were improperly compressed with commercial dies, others were soldered.

1.2 As a result of tests, it was determined that KS aluminum connectors compressed with certain commercial T & B dies were satisfactory. This T. I. removes the prohibition against soldering and using commercial dies with KS aluminum connectors.

2. INSTRUCTIONS

2.01 Add the following paragraph:

1.111 This section now permits the use of certain commercial Thomas and Betts dies that can be used to compress KS-15977 tin plated aluminum lugs. It also covers the expanded application of the R-3799, 12 ton yoke head to which these special dies are fitted. Previously this head had been retained for exclusive use on Electronic jobs.

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2.02 Replace Paragraph 1.12 with the following:

1.12 The tools described herein are manufactured in accordance with Bell Telephone Laboratories KS Specifications and in turn are furnished the W.E. Installer under an "R" tool code and specification. A description of the tools and the methods for using them are provided, as well as detailed instructions for making the connections. These tool-and-die sets are for use only on KS type compression connectors. When unfamiliar with these methods, it is suggested the installer read the entire text before making compression connections. Review carefully the Verification Section.

2.03 Add the following to Table "A";
(TABLE A CONTINUED)

TOOLS

	14	12	10	8	6	4	2	1/0	2/0	4/0	350	500	750
**R-3799													
T&B 12 TON													
YOKE HEAD													
"R" NUMBER													
DIE SET	R-4229 R-4230 R-4231 R-4232 R-4233												
T&B DIE	***												
CODE NO.	41 60 66H 96H 115H												
T&B CAT.													
NO.	11763 11741 11742 11758 11753												

(NOTES CONTINUED)

** The R-3701 hydraulic pump and hose is used with this head.

*** All T&B dies emboss the die code number on the lug with the exception of the "41" die. This die embosses "4AL" on the lug.

2.04 Add the following paragraphs after Table "A";

1.4 Soldering KS Aluminum Connectors

1.41 If and when KS Aluminum connectors are attached to wire ends by soldering, it will be authorized in Section 7J of this handbook.

2.05 Add the following paragraphs;

2.5 R-3799 T&B Twelve Ton Yoke Type Compression Head

2.51 The R-3799 is physically the size of the intermediate "C" head but has the capacity of compressing the largest of the KS-15977 lugs. The cylindrical shaped portion containing the movable piston is an extension of the bottom of "U" shaped members. The fixed die half attaches to a loose structural member which engages with the open end of the "U" and locks into place. The piston and second die half work against the connector and fixed die half to compress the connectors. The tool is capable of developing upwards to twelve tons of pressure with 9,800 P.S.I. of hydraulic fluid. The tool measures 4 5/8 X 10 1/4 and weighs 7 1/2 pounds.

2.52 Prior to the time of this writing, the head and three commercial dies were contained in a shipping and carrying case and was used with the R-3701 pump, but was reserved for exclusive use on electronic jobs furnished commercial T&B lugs. See Paragraph 7. Presently, (1) five additional commercial dies have been added for use on KS connectors, (2) a second coupler made by Parker Hannifin (Cat. 3050-3) has been added to also allow the head to be attached to the Tool Set 803 pump R-4143 and plastic hoses, and (3) the assembly has been assigned Tool Set 804.

2.53 Do not operate the head without dies, connector and wire, and do not disassemble the head.

2.6 Defective Heads or Pumps

2.61 Minor repairs, that obviously are within the area of correction by the installer, are permitted. This would include, for example, repair of the line card on the pump, leaking fittings on the pump or hoses or heads, etc. Repair as internal adjustments on the pump or heads is not permitted and necessitate return of the item to an authorized repair location. The tools and repair locations are listed on the following page and associated by bracketed letters:

(A) H. K. PORTER, INC.
74 Foley Street
Somerville, Massachusetts 02143

Att: MR. T. M. PORTER

(B) BROCK EQUIPMENT CO.
Pyott Road
Crystal Lake, Illinois 60014

Att: MR. W. C. Anselment

(C) THOMAS & BETTS CO.
36 Butler Street
Elizabeth, New Jersey 07207

Att: MR. R. F. PEARSON

- (C) R-3701 Black Hawk pump made for T&B - Cat. 13580 or 13587
- (B) R-3701 5ACR pump made for Alcoa by Brock Equipment Co.
- (C) R-3799 12 ton yoke type head. May or may not be part of Tool Set 804.
- (A) R-4135 hand crimping tool (for adjustment see paragraph 4.151)
- (C) R-4136 15 ton T&B "C" type head (tool Set 801)
- (B) R-4143 Alcoa 5ACR-WK pump made by Brock Equipment Co. (Tool Set 803)
- (B) R-4198 Alcoa 12 ton "C" type head (Tool Set 802)

2.62 Concur with your Regional Installation Stockkeeping Organization before returning a defective tool.

2.63 Very carefully pack the item in a heavily constructed container commensurate with the size and weight of the item, and be sure to include full return address and phone number.

2.06 After Paragraph 4.2 add the following Note:

NOTE: The following paragraphs assume use of the R-4143 Hydraulic Pump. The notations concerning the operation of the "Circuit Breaker," operation of the "Hold" button,

etc., do not apply to the older R-3701 Pump, however, the basic operations are the same.

2.07 Replace Paragraph 4.22 with the following:

4.22 The R-4198 intermediate head will squeeze wire sizes No. 4 through No. 4/0. The R-4136 large head will squeeze wire sizes - No. 4 through 750 MCM. The R-3799 yoke type head will squeeze wire sizes No. 4 through 750 MCM when used with the commercial dies listed in Table "A". The number of compressions per connector is not necessarily the same with each head and their respective dies. See Section 7J.

2.08 Replace Paragraph 5.33 with the following:

5.33 Determine that the proper dies were used by comparing the list numbers or die code number embossed on the lug by the squeezing of the dies, with the wire size shown in Section 7J.

2.09 Add the following paragraph:

6.4 T & B 12 Ton Yoke Type Head

6.41 Disconnect the hose and wipe up the small amount of oil lost. Replace the dust cap and dust plug and place the head in the R-4234 Shipping and Carrying Case along with, (1) the alternator hose coupling for the head, (2) 3 commercial dies (71H - R-3702) (87H - R-3703) and (106H - R-3704) for commercial copper lugs and, (3) 5 commercial dies (41 - R-4229), (60 - R-4230), (66H - R-4231), (96H - R-4232) and (115H - R-4233) for KS connectors. Close the lid and rear as described in Paragraph 6.11.

2.10 Replace last sentence in Paragraph 7.13 with the following:

7.13 - - The R-3799 presently equipped with three commercial dies to compress 350, 500 and 750 MCM commercial connectors, is now being changed to add five more commercial dies for compressing the new KS connectors and thus obviate the need for additional heads or pump for Electronic Jobs. An additional coupling is also being furnished with the head so it may be used with the R-4143 pump.

2.11 Delete Paragraphs 7.14 and 7.15.

2.12 Make requirements of Paragraphs 3.25 through 3.53, 5.32, 5.33, 5.34, 5.35, 5.36, 5.37 and 5.38.