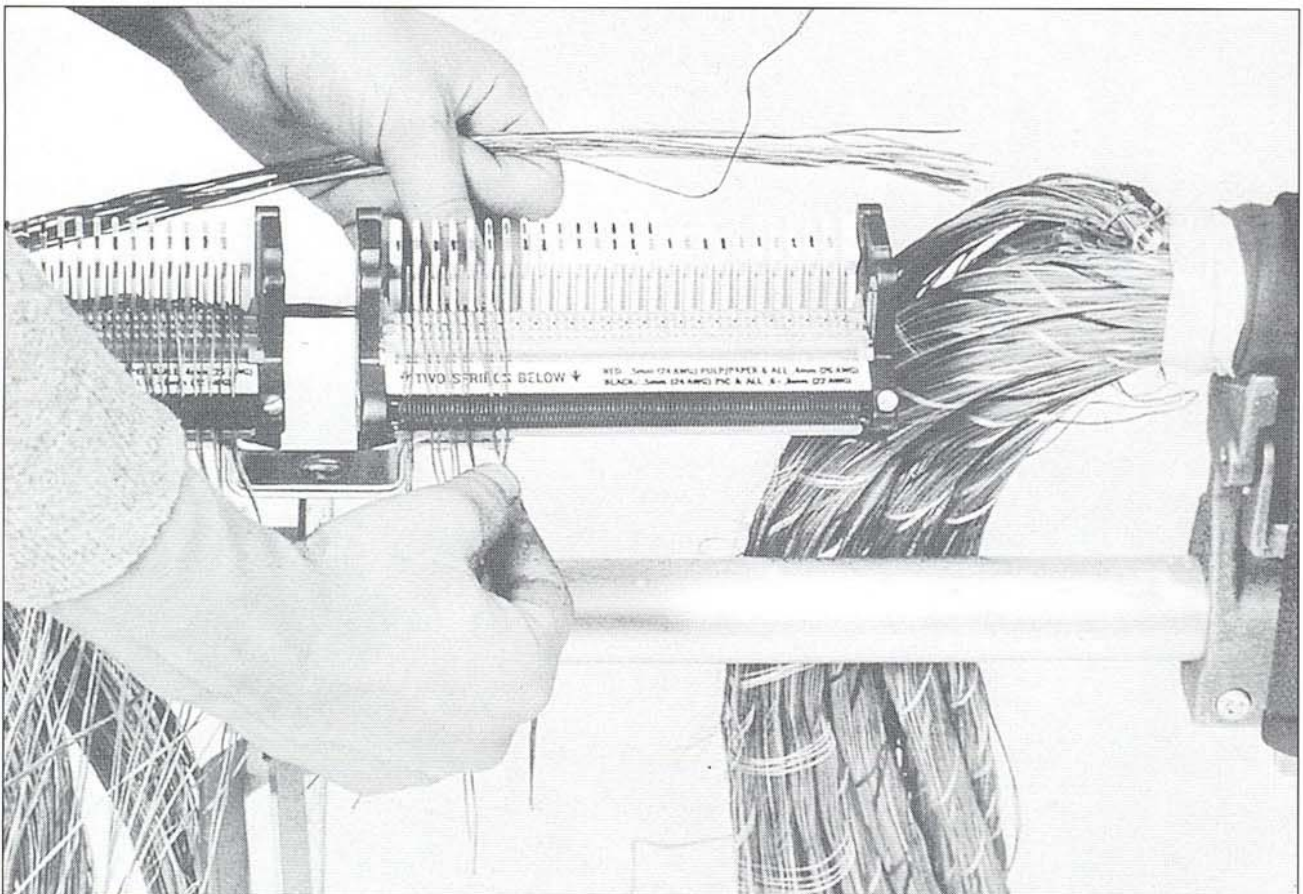


DEVELOPMENT DEPARTMENT

CONDUCTOR SPLICING WITH JOINTING MODULE FOR 10 ; 20 and 25 pair



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3	Splicing	6
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All equipment and tools are subject to change without notice.

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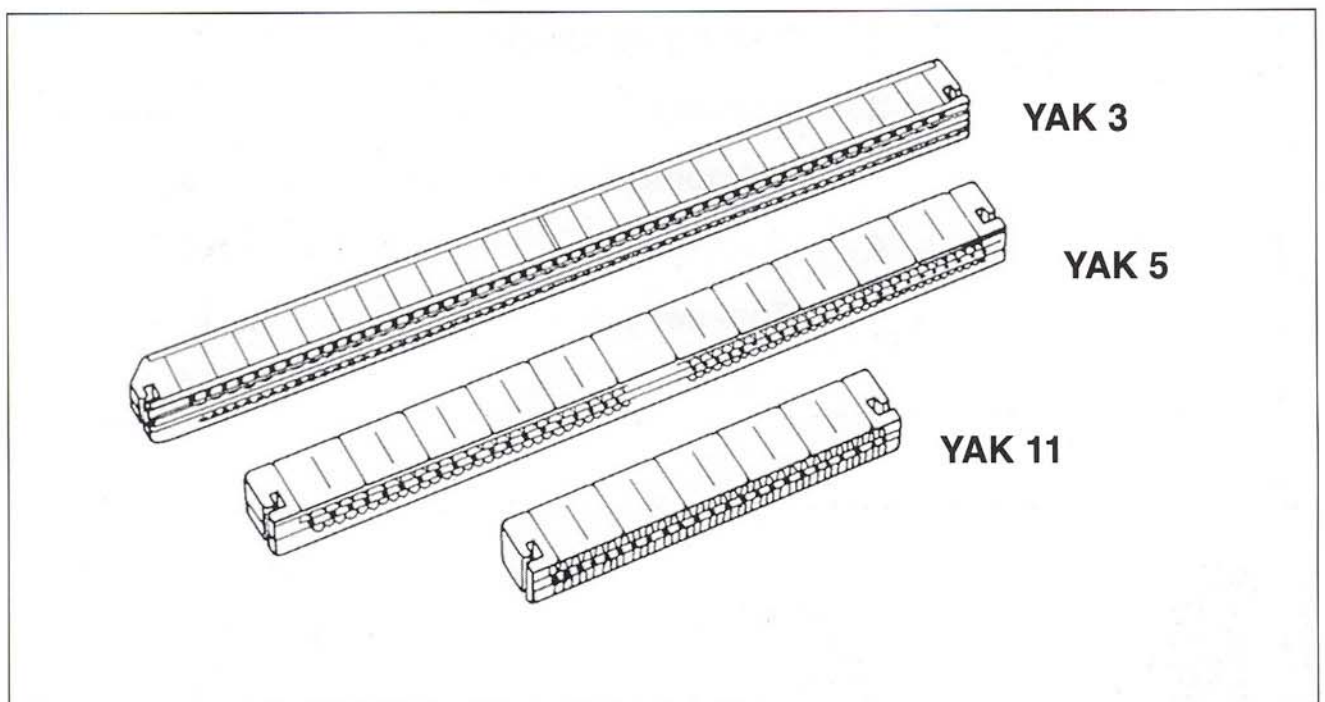
1. INTRODUCTION

Joining modules are used to join together paper or plastic- insulated cable conductors of copper with diameter 0.32 mm and an insulation diameter of max 1.65 mm. They are available for 10, 20 and 25 pairs

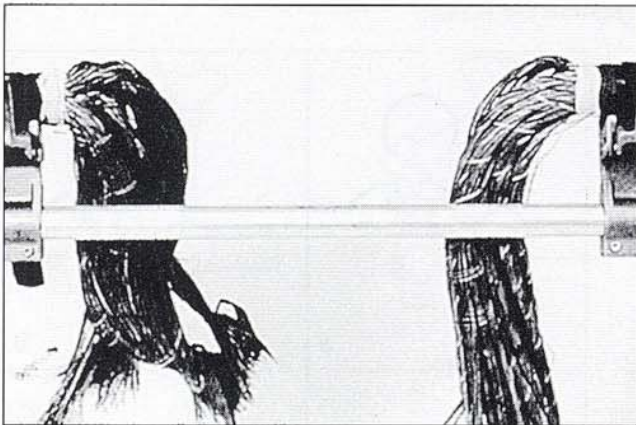
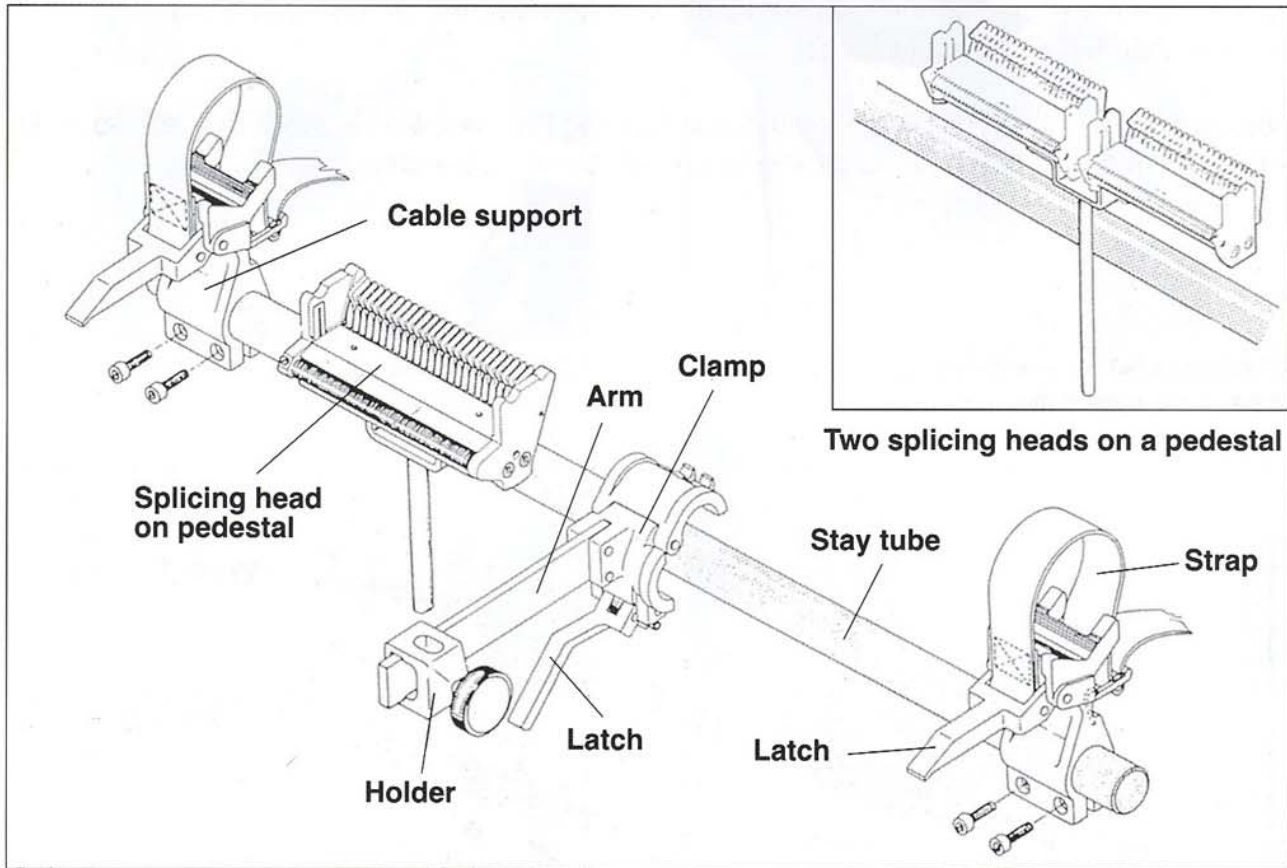
For splicing with this type of joining module Splicing Rig YAK-4 is needed. One or two of its splicing heads can be used, according to the number of cable pairs.

JOINING MODULE

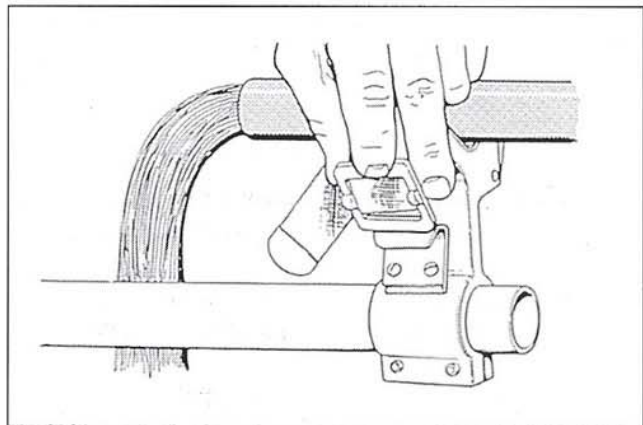
(see also page 6 and 10)



2. SETTING UP SPLICING RIG



Check that the cable ends are secured to the cable brackets in the manhole.

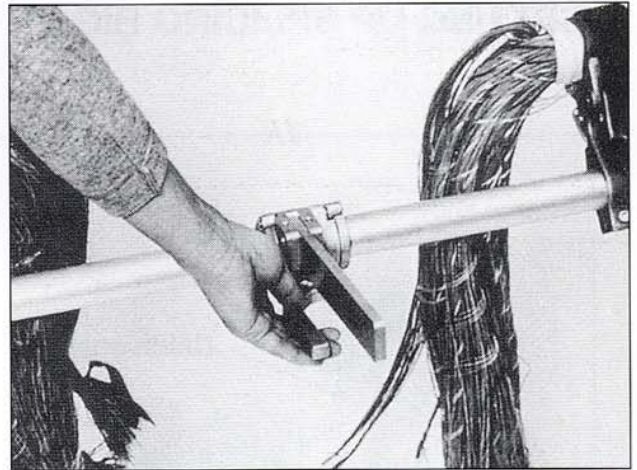


Place the strap over the cable and fasten the buckle to the hook on the backside.

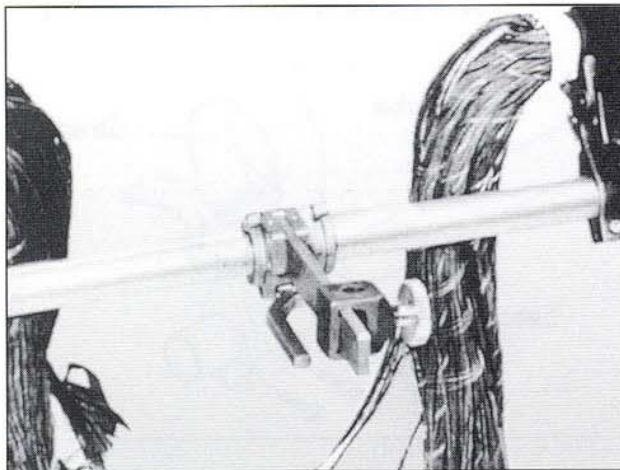
Centre the stay tube (with the two cable supports) under the joint opening. Measures of joint openings and jointing sleeves are obtainable from the table on page 14.



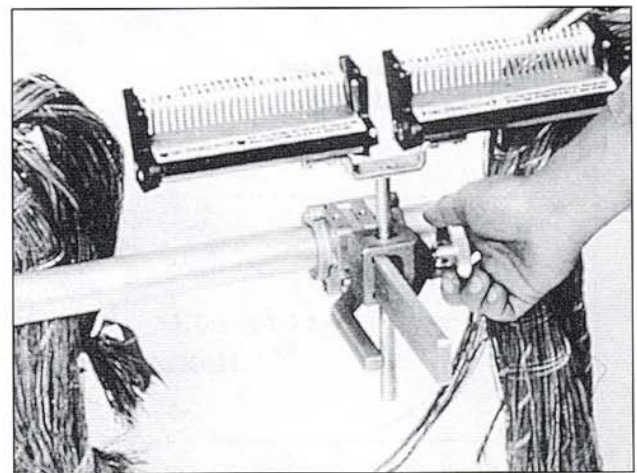
Pull the strap tight and push the latch down to secure the stay tube to the cable.



Attach the clamp with the short arm to the stay tube. Secure the clamp by squeezing its latch.



Slide the holder on to the arm of the clamp.

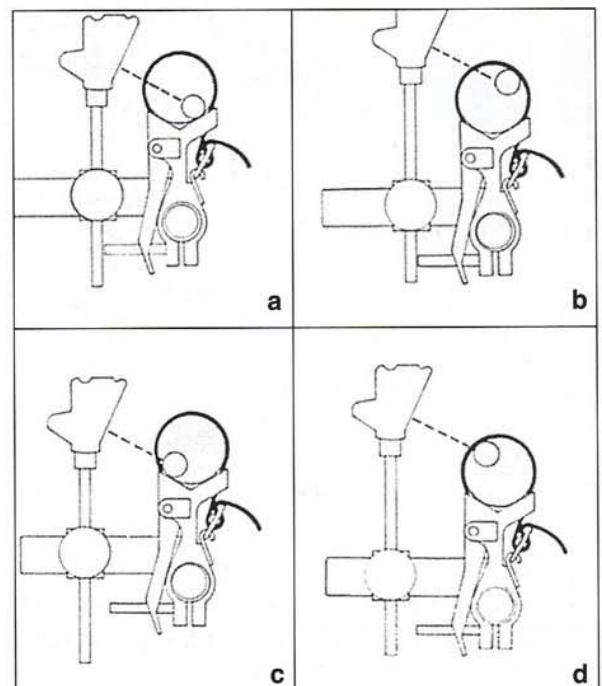


Insert the splicing head pedestal into the holder and tighten the knob.

Centre the splicing head in the joint opening by releasing the latch of the clamp. Then lock the latch.

Adjust the height of the splicing head in order to bring it just above the cable unit that is to be jointed.

Start to joint the cable unit that is located furthest away from the splicing head (fig. a). Continue as on figures b to d.

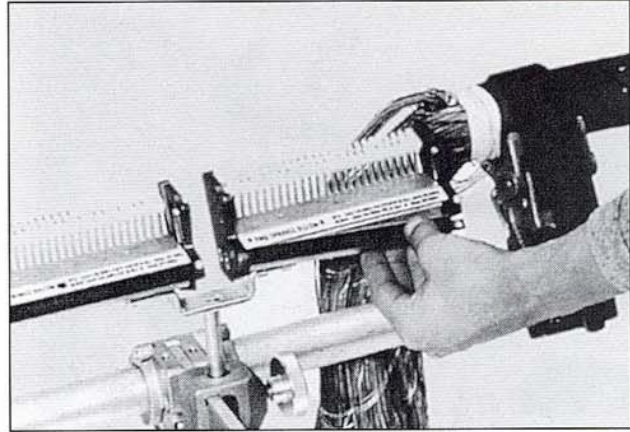


View from side

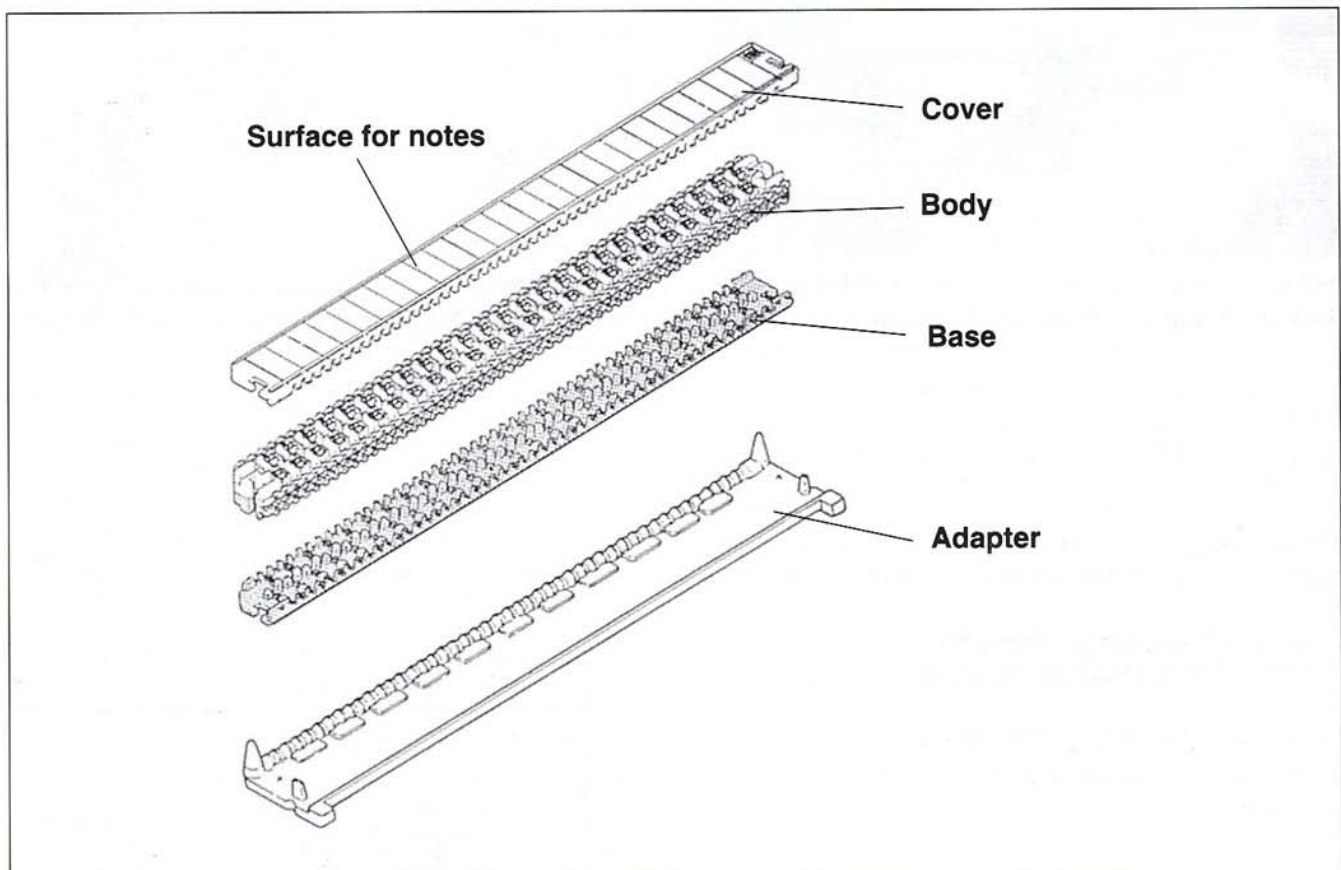
The splicing head is equipped with two wire-retainer springs in different colours. These are intended for keeping the cable wires in place during the splicing work

Red spring: For wire diameter 0.32 to 0.5 mm.

Black spring: For wire diameter 0.5 to 0.8 mm.

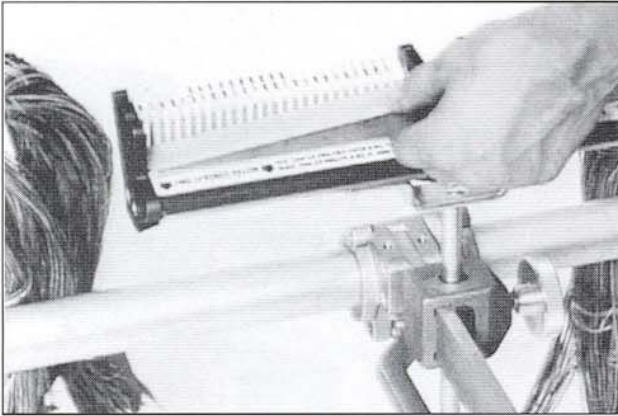


3. SPLICING

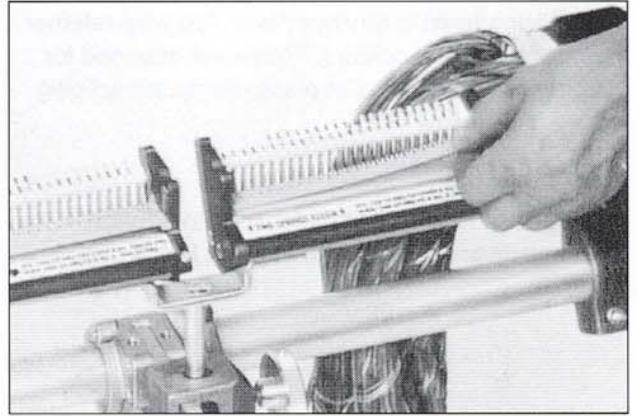


A jointing module consists of three components; base, body and cover. They are available in three sizes; for 10, 20 and 25 pairs. In order to make the module fit

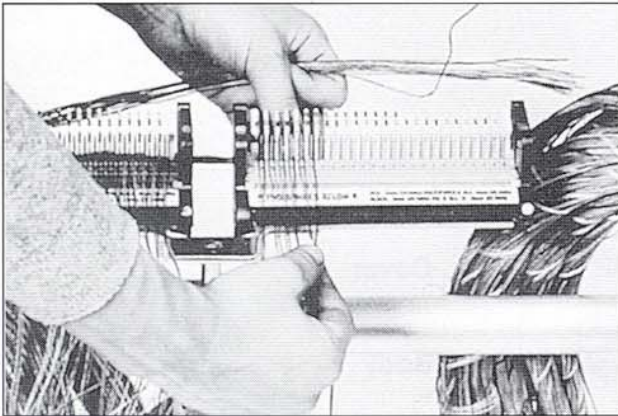
the splicing head, an adapter is needed for 25-pair module. For 10- and 20-pair module, a matrix is used instead.



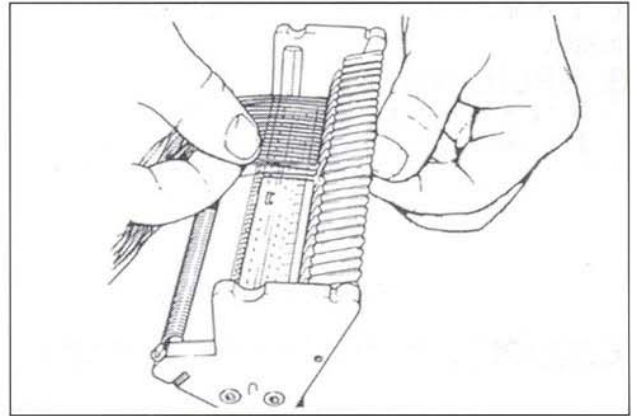
Place the adapter (or matrix) into the leaf-spring tracks of the splicing head. The adapter fits into the splicing head in one way only.



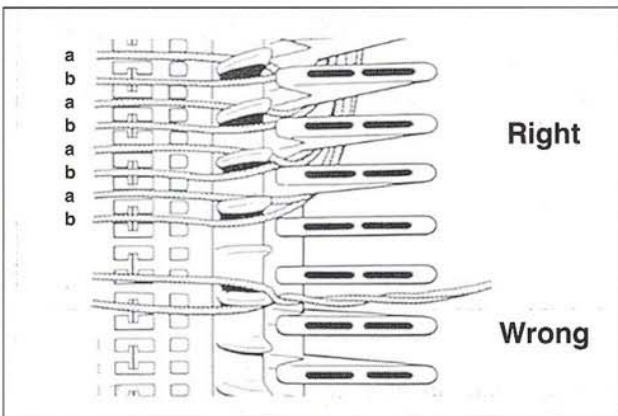
Place the base of the jointing module onto the adapter, which can be done just in one way.



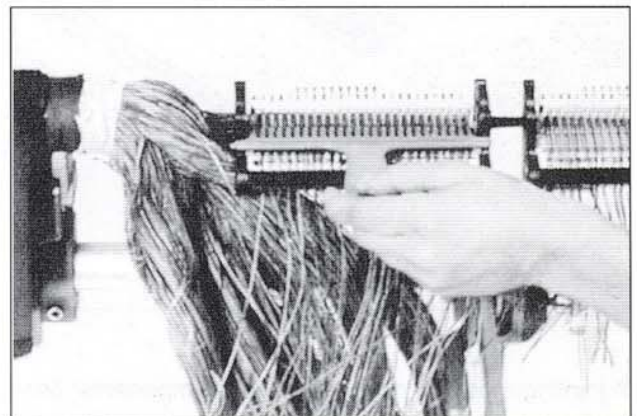
Select a wire group from one of the cable ends. Place each pair in the wire guide to the right of its matching colour. (When using 10- or 20-pair module, the colour code is found on the matrix). Split the pair over the pair splitter, a-wire to the left and b-wire to the right. Place the wires into the wire channels of the base and into the wire-retainer spring.



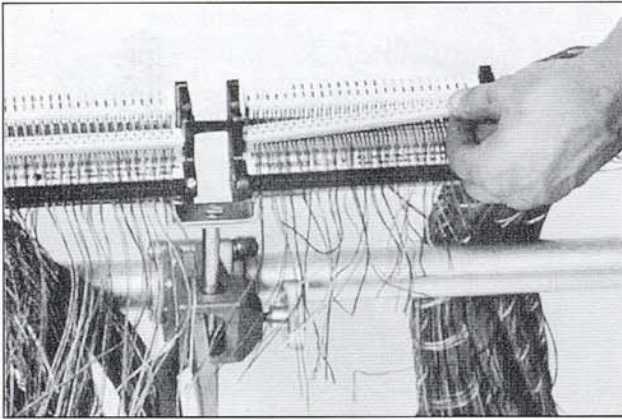
Hold thumb and forefinger of your guide hand close to the back of the splicing head.



Otherwise a knot can damage the wire insulation.



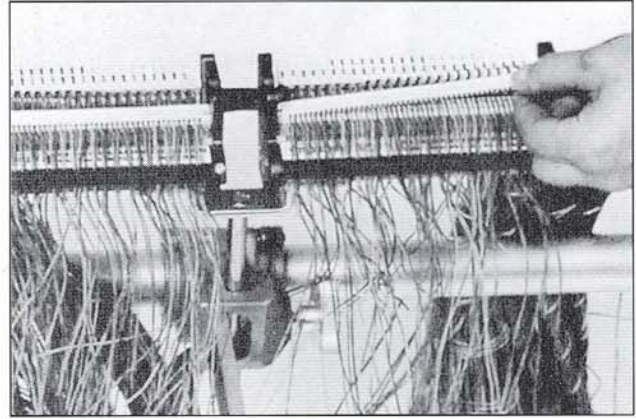
Place the checking tool over the base and check the wiring order.



Place the body of the jointing module into the leaf-spring tracks of the splicing head with the pairsplitter marking upwards.

Note 25-pair module have a cut corner. Please the cut corner of the body to the left and away from the jointer.

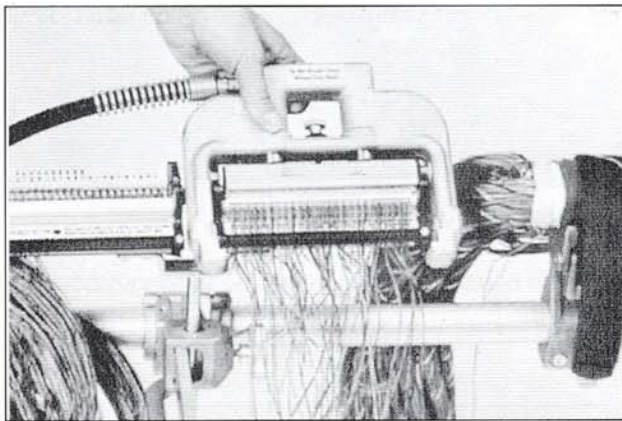
Then take the matching pairs of the other cable end and lay the wires into the channels in the body.



Check the wiring order in the body with the checking tool.

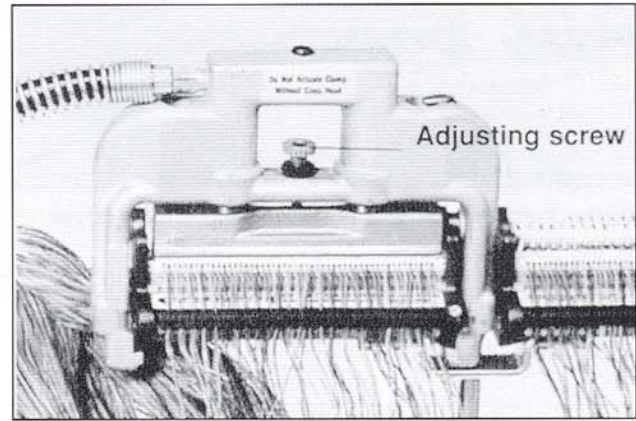
Place the cover of the jointing module on top of the body.

CRIMPING THE JOINTING MODULE

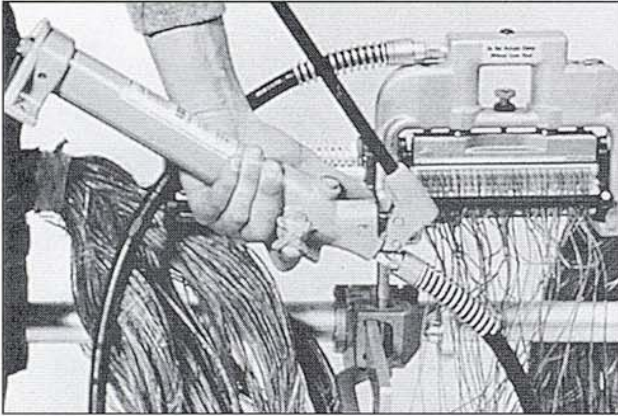


Position the crimping clamp into the tracks on top of the splicing head.

Rotate the crimping clamp until it is locked by the detents in an upright position.

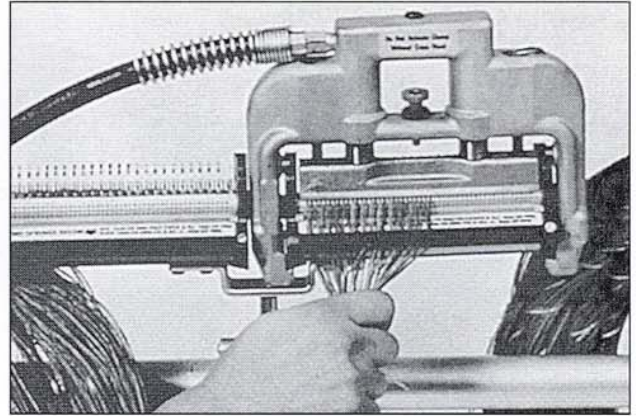


An adjusting screw on the crimping clamp can be set to limit the return of the crimping bar.



Crimp the jointing module with the crimping unit.

When proper crimping pressure is reached, a bypass valve opens on the pump.

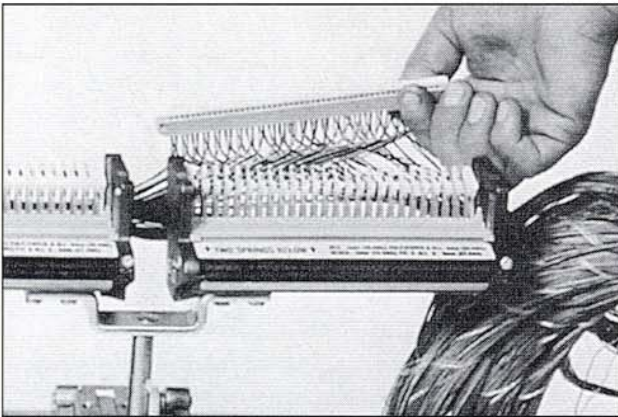


Remove the cut wire ends from the retainer spring.

Note To avoid damaging the retainer spring, do not attempt to remove all wires at once.

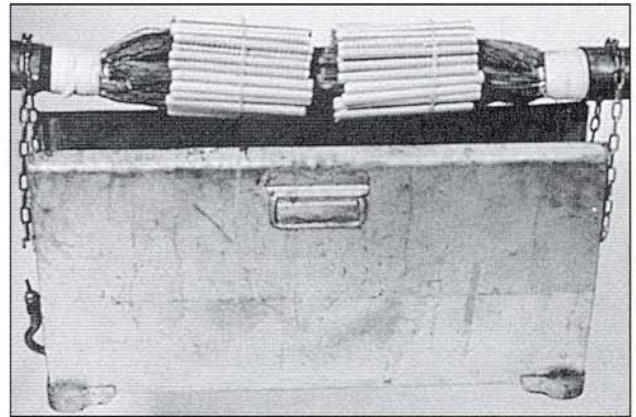
Release the pressure on the crimping module by turning the knob on the pump.

Remove the crimping module from the splicing head.



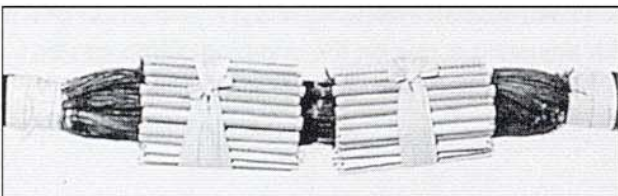
Write down the cable-pair numbering on the cover of the jointing module.

Remove the jointing module from the splicing head and fold it back.

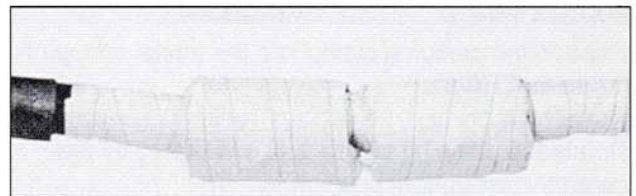


Dry the entire joint with hot air.

Note Be careful not to damage the jointing module during the drying.



Secure the splicing groups by wrapping with cotton tape.



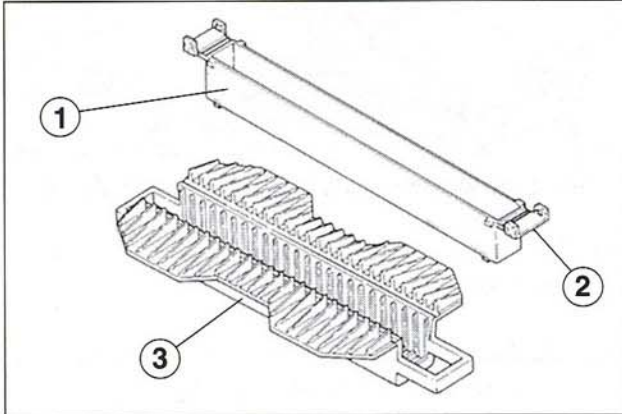
Finally wrap the entire joint with two layers of cotton tape with 50% overlap.

Note To avoid the cotton tape from absorbing the petroleum gelly, wrap gelly-filled plastic cables with tape (transparent, 100 mm) before wrapping the joint with cotton tape.

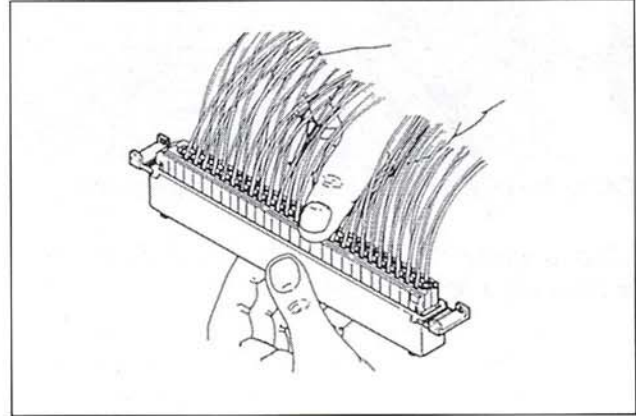
4. ACCESSORIES

SEALANT BOX (YAK- 3B)

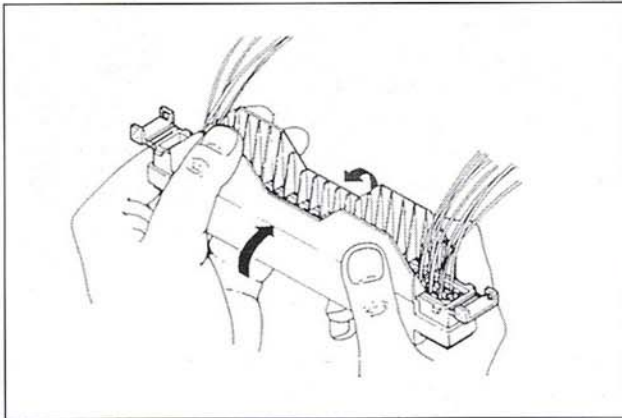
In order to protect the jointing module from moisture, the modules can be installed in moisture-proof sealant boxes.



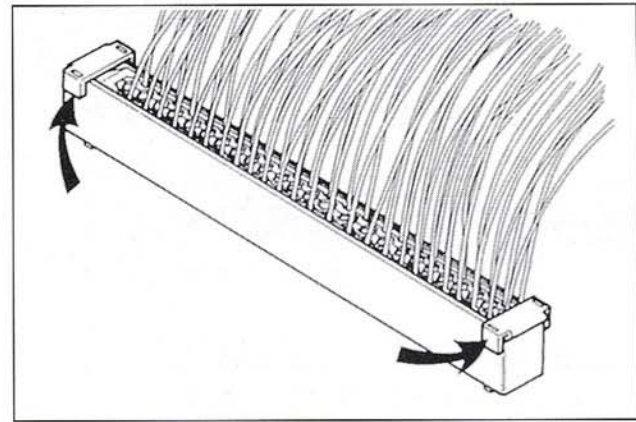
1. Sealant box
2. Latches
3. Inserting tool



Press the jointing module into the sealant box as far as possible.



Install the inserting tool. Lift the wings of the tool in order to press the jointing module completely into the box.

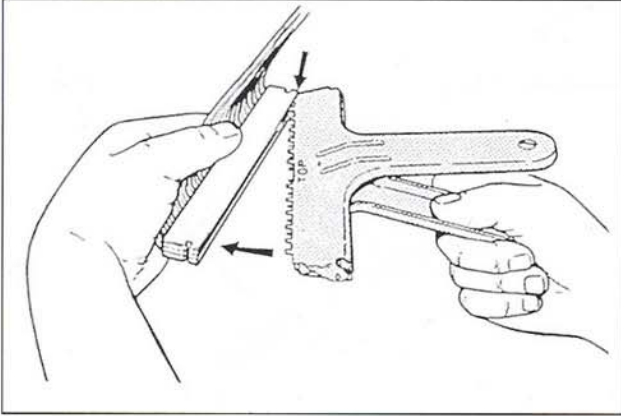


Snap the latches on the ends of the box to lock the jointing module into place.

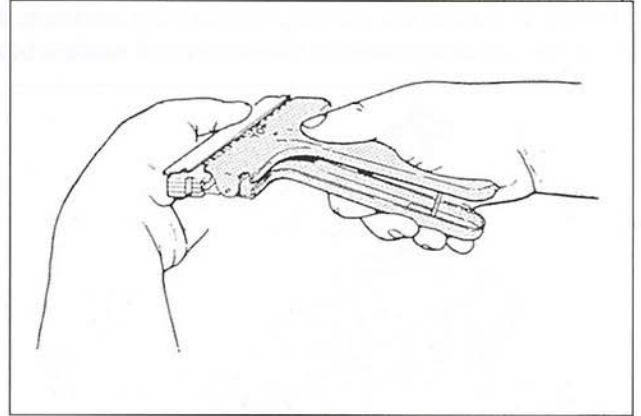


DISMOUNTING TOOL

To separate the base or cover from the body of a crimped jointing module, use dismounting tool YAK-4.8 (for 25 pairs).

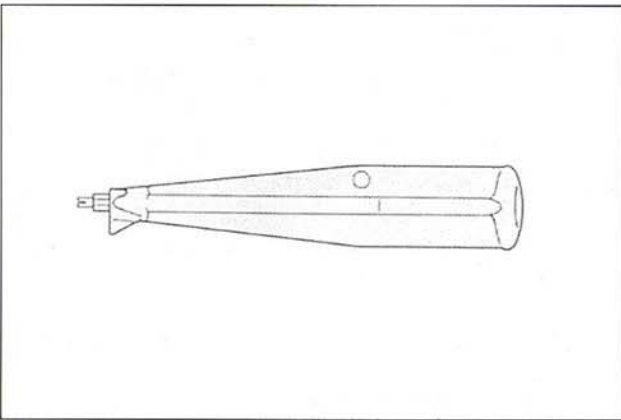


Insert the right pin of the tool into the right wire port of the jointing module. Rotate the tool into the remaining ports along the cover or base.



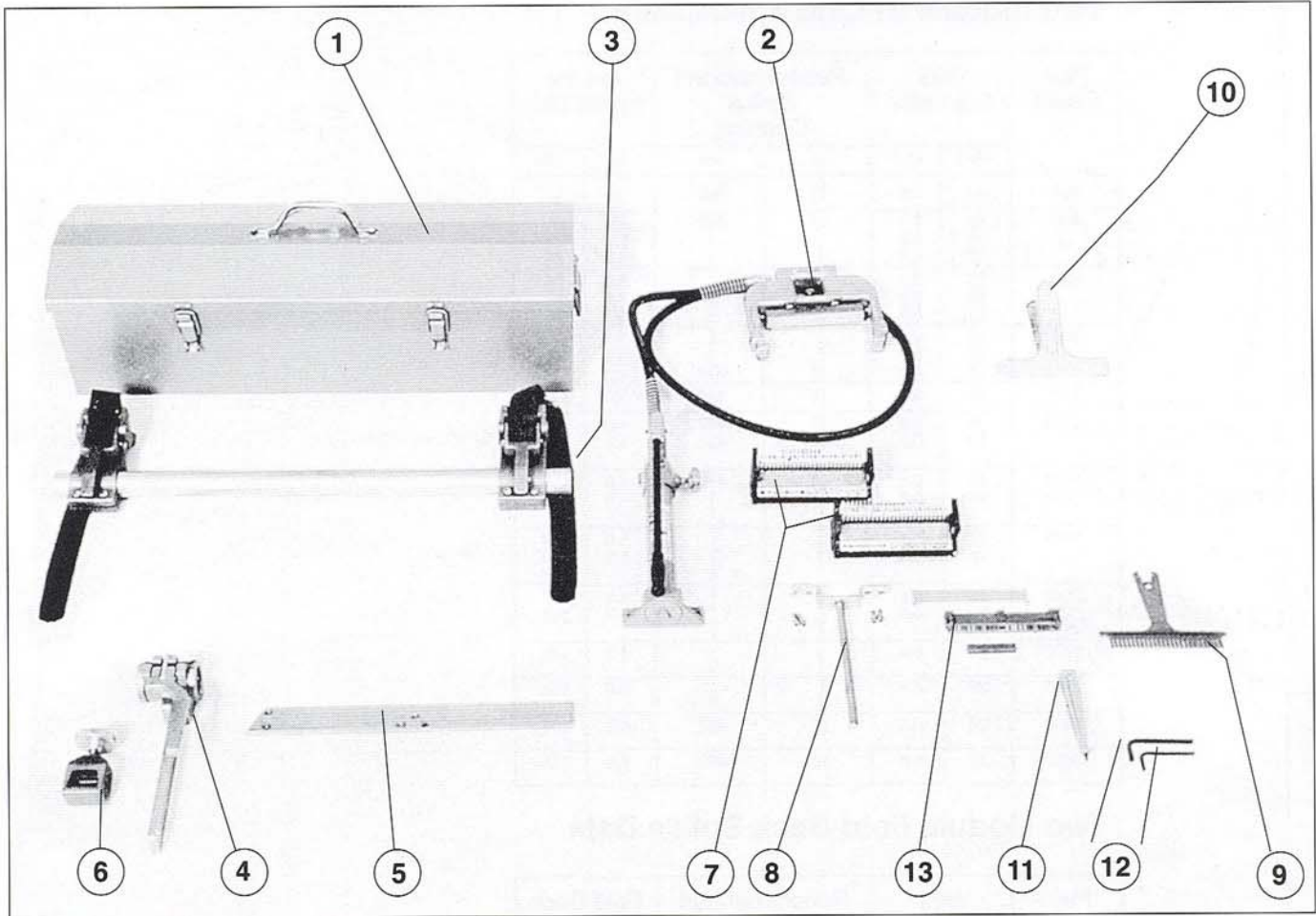
Squeeze the tool handle.

CONNECTION TOOL



With connection tool YAK-4.9, cable pairs can be connected and cut manually.

5.TOOL SET YAK-4



Item	Qty	Name	Article Code	Item	Qty	Name	Article Code
1	1	Storage box	YAK- 4.1	11	1	Connection tool	YAK-4.9
2	1	Crimping unit (crimping clamp and pump)	YAK- 4.2	12	1	Locking key hexagon 3/16" and 1/4"	YAK-4.11
3	1	Stay tube	YAK- 4.7	13*	1	Matrix for 10 and 20 pairs	YAK-4.12
4	1	Clamp with short travers	YAK- 4.5	14	1	Splicing head Adapter plate	YAK-4.3.1.5
5	1	Long travers	YAK- 4.6				
6	1	Holder	YAK- 4.4				
7	1	Splicing head	YAK- 4.3				
8	1	Holder for splicing head (pedestal)	YAK- 4.3.3				
9	1	Checking tool,	YAK- 4.10				
10	1	Dismounting tool, For 25 pairs	YAK- 4.8				

*Not included in tool set yak-4



6. TABLES

Two module In-Line Splice Data

Pair Count	Wire Diameter		Recommended Splice Opening		In-Line Splice Dia.	
	AWG	mm	in.	mm	in.	mm
200	24	0.5	11	280	2	51
400	26	0.4	↓	↓	2.5	64
	24	0.5			2.8	71
	22	0.6			3.0	76
600	26	0.4	↓	↓	3.0	76
	24	0.5			3.4	86
	22	0.6			3.7	94
900	26	0.4	↓	↓	3.5	89
	24	0.5			3.9	99
	22	0.6			4.5	114
1100	22	0.6	19	483	5.0	127
1200	26	0.4	17	432	4.0	102
	24	0.5	17	432	4.3	109
1500	26	0.4	↓	↓	4.5	114
	24	0.5			4.8	122
1800	26	0.4	↓	↓	5.0	127
	24	0.5			5.3	135
2100	26	0.4	↓	↓	5.4	137
	24	0.5			5.7	145
2400	26	0.4	↓	↓	5.7	145
2700	26	0.4	↓	↓	6.0	152
3000	26	0.4	19	483	6.5	165
3600	26	0.4	19	483	7.0	178

Two Module Fold-Back Splice Data

Pair Count	Wire Diameter		Recommended Splice Opening		Fold Back Splice Dia.	
	AWG	mm	in.	mm	in.	mm
200	24	0.5	11	280	2	51
400	26	0.4	↓	↓	2.5	64
	24	0.5			2.8	71
	22	0.6			4.0	102
600	26	0.4	↓	↓	3.2	81
	24	0.5			3.9	99
	22	0.6			4.8	122
900	26	0.4	↓	↓	4.1	104
	24	0.5			5.0	127
	22	0.6			5.8	147
1100	22	0.6	19	483	6.5	165
1200	26	0.4	17	432	4.7	119
	24	0.5	17	432	5.0	127
1500	26	0.4	↓	↓	5.4	137
	24	0.5			5.7	145
1800	26	0.4	↓	↓	6.0	152
	24	0.5			6.3	160
2100	26	0.4	↓	↓	6.2	157
	24	0.5			6.5	165
2400	26	0.4	↓	↓	6.5	165
2700	26	0.4	↓	↓	7.2	183
3000	26	0.4	19	483	7.6	193
3600	26	0.4	19	483	8.0	203



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