

<b>OBSTA</b> Division <b>CLAUDE</b>  <b>Reims plant</b>	TECHNIQUE		SPE n°	TE.21.BA.155	ind. C
	SPECIFICATION		Edité le 07 juin 2002 Remplace doc. N° TE.21.BA.155.B		
<b>SUJET : <u>B220 and B380 BALISOR</u></b> <b><u>EQUIPMENT ASSEMBLY</u></b>			Page N° 1 de 7 pages Concerne : CB.ODT.		
Etabli par :	visa :	Approuvé par :	visa :		
Y.PORET		JM.HUVET			

## INTRODUCTION:

- This specification covers warning devices for transmission lines with a voltage more than **210 kV**.
- The two devices, **BALISOR B220** or **BALISOR B380**, are assembled identically whether the line is on the ground or is already installed.
- Installers shall under no circumstances change any of the component parts of a **BALISOR** during assembly and shall take care that all subassemblies are original "**OBSTA**" parts in compliance with appropriate "**OBSTA**" drawings. Subassemblies consist of parts assembled in "**OBSTA**" plants and identified on the drawings and documents by the same letters (A - B - C -, etc).

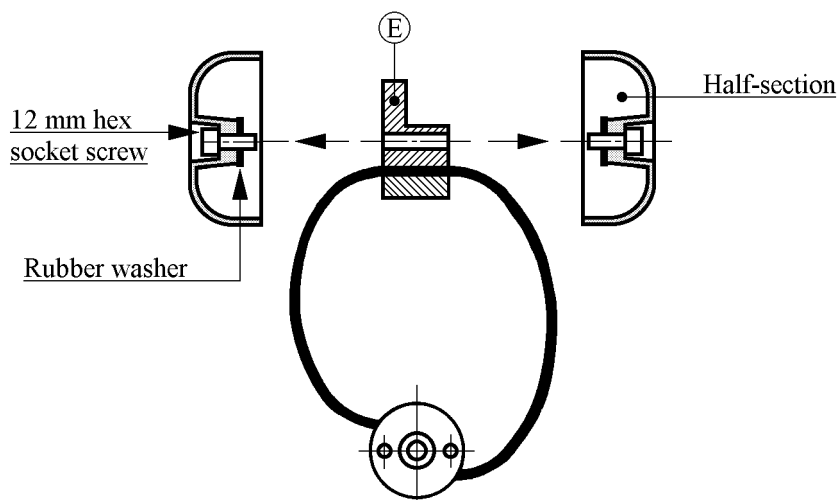
**Installers shall rigorously respect the following order of assembly.**

## ASSEMBLY:

### 1. PREPARATION OF SUBASSEMBLIES:

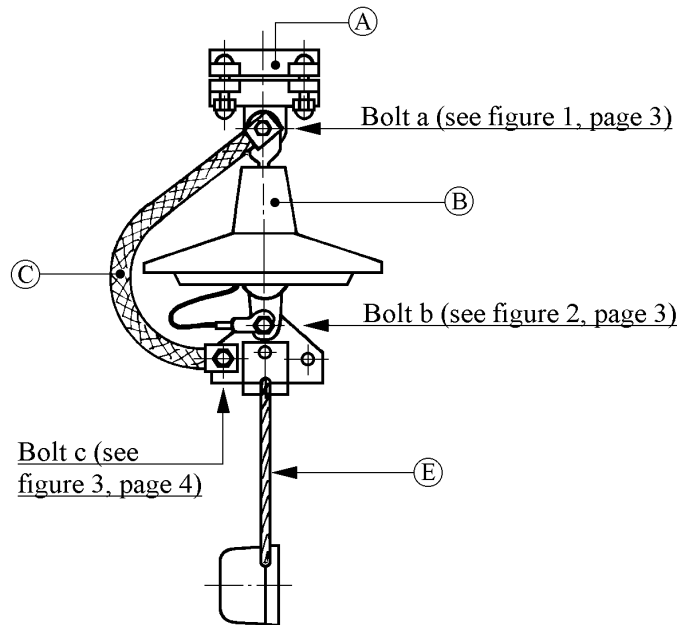
#### 1.1. Assembly of clamp, insulator, shunt-braid, lamp-holder.

1.1.1. Preparation: Before assembly of subassemblies, separate the two protective half-sections from part E as below:



**CAUTION:** Make sure that the 12 mm socket screws and the rubber washers are solidly connected to the half-sections so that cannot be lost

1.1.2. Assembly:

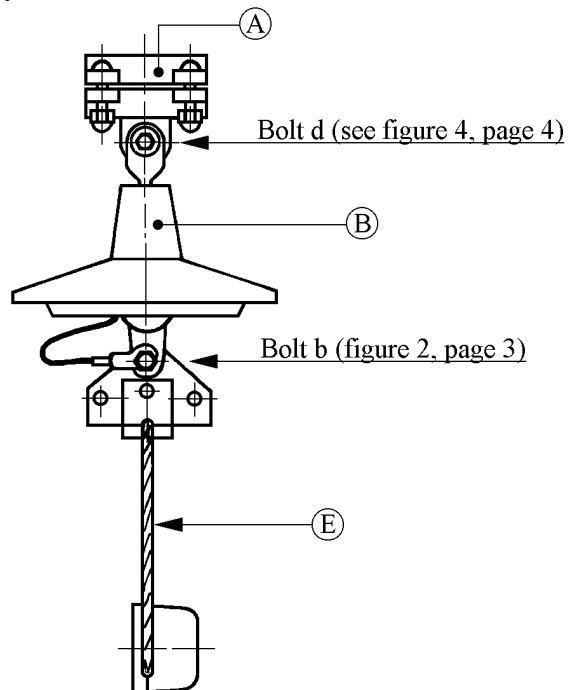


**NOTE:** Lock lock-nuts a, b, and c during assembly to the torque specified after each figure.

**1.2. Clamp, insulator, lamp-holder assembly.**

1.2.1. Preparation: Before assembly of subassemblies, separate the two protective half-sections from part E (see paragraph 1.1.1.).

1.2.2. Assembly:

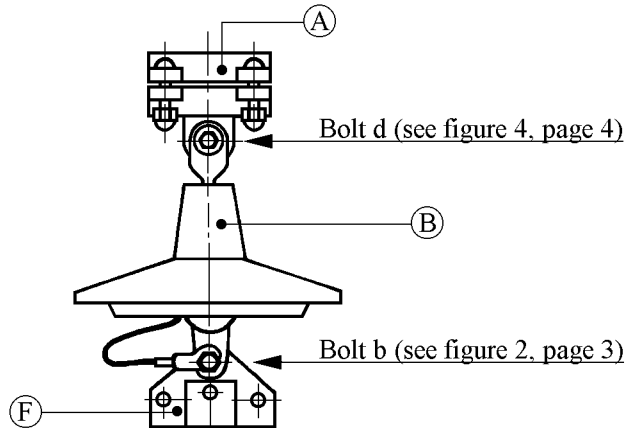


**NOTE:** Lock lock-nuts b and d during assembly to the torque specified after each figure.

### 1.3. Clamp, insulator, holder assembly.

1.3.1. Preparation: Before assembly of subassemblies, separate the two protective half-sections from part F (see paragraph 1.1.1.).

#### 1.3.2. Assembly

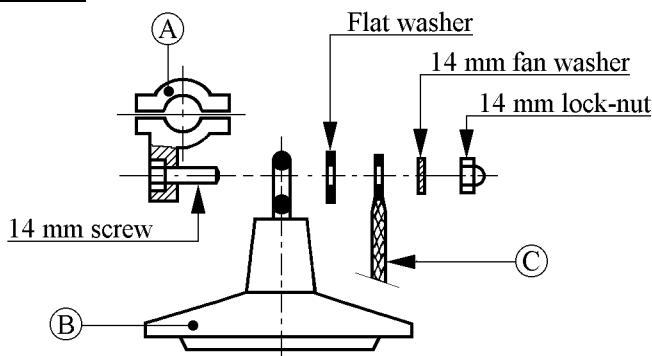


**NOTE:** Lock lock-nuts of bolts b and d during assembly to the torque specified after each figure.

Prepare 2 of the subassemblies for a BALISOR B220 and only one for a BALISOR B380.

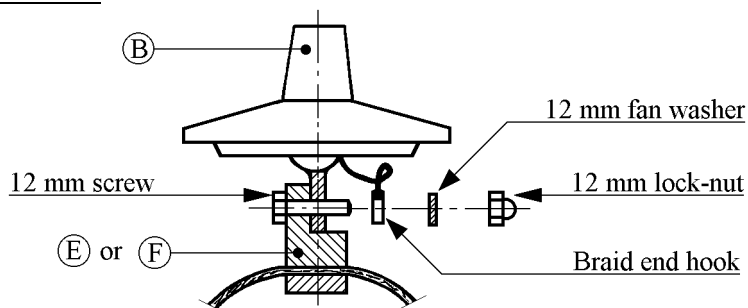
### 1.4. Securing points a, b, c, and d.

#### 1.4.1. FIGURE 1: Bolt a



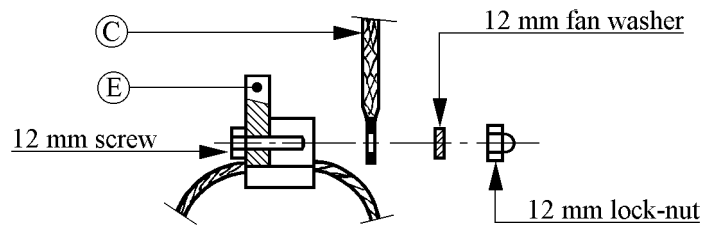
**NOTE: Tighten 14 mm lock-nut to torque: 40 - 60 m.N**

#### 1.4.2. FIGURE 2: Bolt b



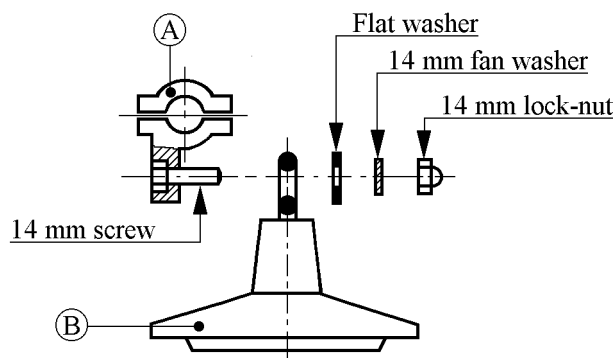
**NOTE: Tighten 12 mm lock-nut to torque: 20 - 30 m.N**

1.4.3. FIGURE 3: Bolt c



**NOTE: Tighten 12 mm lock-nut to torque: 20 - 30 m.N**

1.4.4. FIGURE 4: Bolt d



**NOTE: Tighten 14 mm lock-nut to torque: 40 - 60 m.N**

**2. ASSEMBLY OF LINE SUSPENSION SUBASSEMBLIES:**

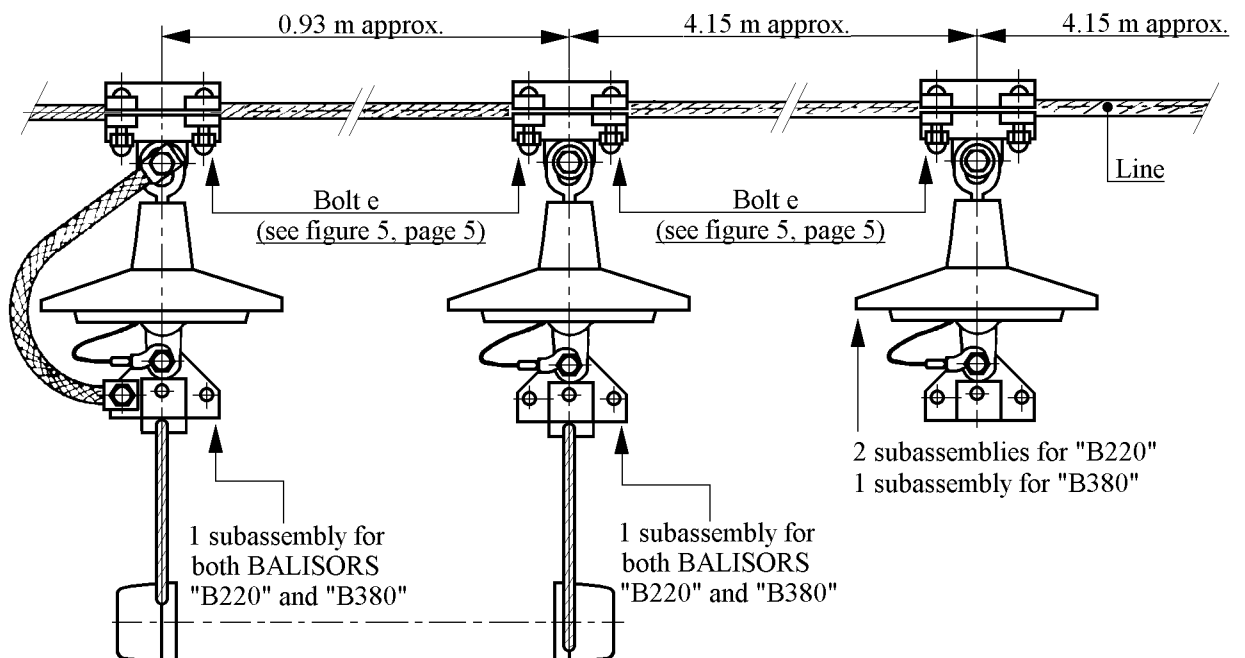
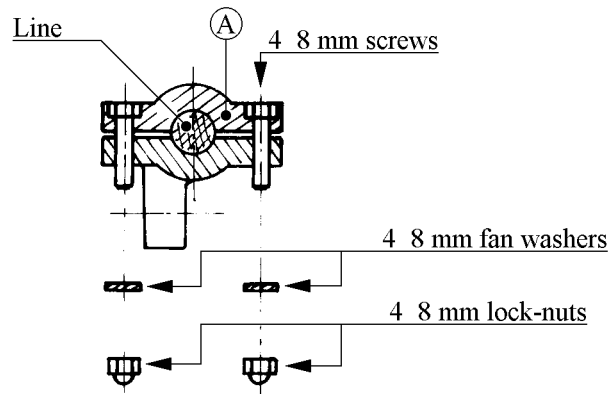
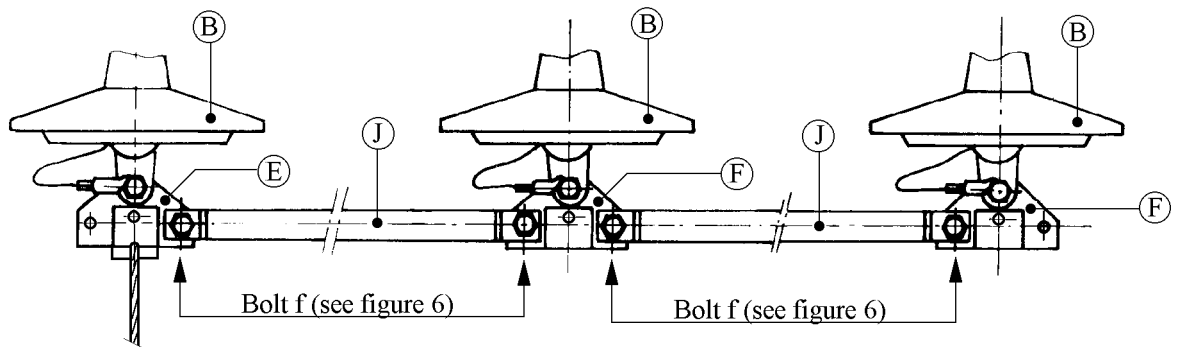


FIGURE 5: Bolt e



**IMPORTANT:** Do not lock the lock-nuts during assembly in order to allow any necessary longitudinal movement on the line.  
 Lock them after assembly of the auxiliary tubing and the lamp.

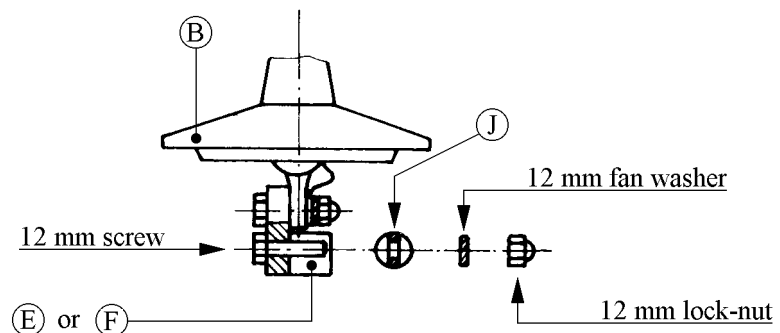
**3. ASSEMBLY OF AUXILIARY TUBING:**



**NOTE:**

2 auxiliary tubings are required for a BALISOR B220.  
 1 auxiliary tubing is required for a BALISOR B380.

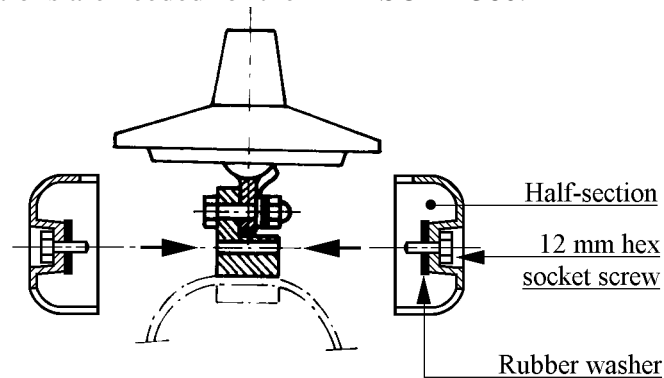
FIGURE 6: Bolt f



**NOTE: Tighten 12 mm lock-nut to torque: 20 - 30 m.N**

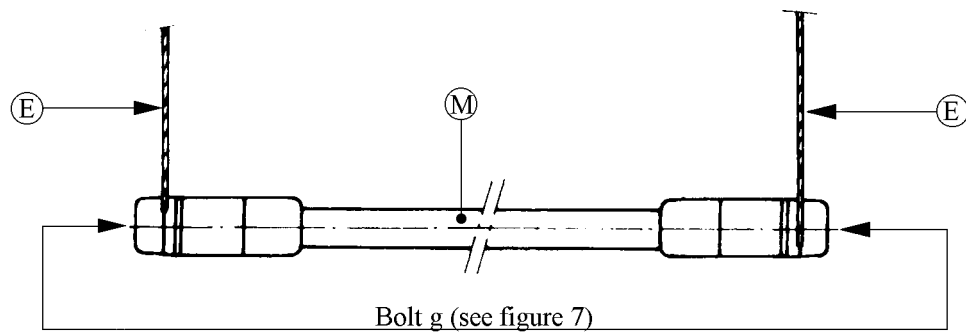
**4. ASSEMBLY OF PROTECTIVE HALF-SECTIONS:**

- 8 half-sections are needed for the BALISOR B220.
- 6 half-sections are needed for the BALISOR B380.

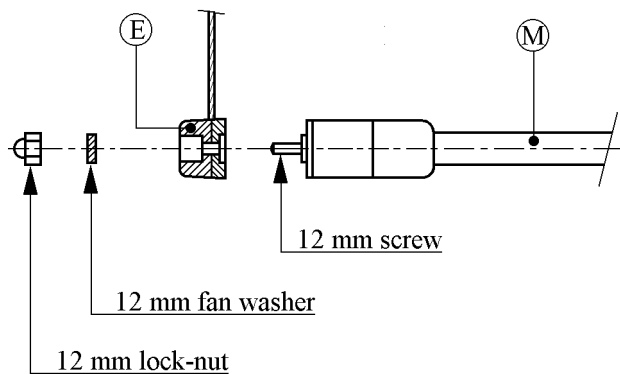


**NOTE: Tighten 12 mm hex socket screws to torque: 20 - 30 m.N**

**5. ASSEMBLY OF LAMP ON FLEXIBLE-CONNECTORS:**



**FIGURE 7: Bolt g**



**NOTE: Tighten 12 mm lock-nut to torque: 20 - 30 m.N**

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#### 6. FINAL INSTALLATION OF WARNING DEVICE:

- After assembly of the auxiliary tubing and the lamp, it may prove necessary to slightly change the spacing of the clamps on the line (4 clamps for the BALISOR B220 and 3 clamps for the BALISOR B380).
- Because their screws and nuts were not locked when they were attached to the line, they can be moved longitudinally to their required spacing (see drawing page 4).
- When the clamps are correctly positioned, it is essential that the line is raised in the air when securing the clamps to the cable with 8 lock-nuts (4 for each clamp).

The purpose of this is to make sure that the warning device is solid with the H. V. line.

**NOTE: Tighten 8 mm lock-nuts to torque: 10 - 15 m.N**