NOVA BUS **INFORMATION LETTER** **LI1860ER1**

REFERENCE:	Nova Bus Manuals
SECTION:	99 General Practices
RS Nº:	–
EFFECTIVE IN PROD.:	–

APPLICATION DEADLINE:
–

SUBJECT:	Breeze Clamps
JUSTIFICATION:	Information concerning the positioning and the tightening of breeze clamps on silicone hoses.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Where necessary, position and tighten breeze clamps according to the procedure included in this document.	Client	–	–
2	–	–	–	–

MATERIAL

QTY	PART Nº	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
–	–	–	–	–
LEVEL 2				
–	–	–	–	–

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED	RETAINED	–
	–	–	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2012MA16	Initial release	Danielle Lacroix
R1	2012DE03	Specifications modified, and installation steps added.	Danielle Lacroix

APPROVED BY: Karine Allonce

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Date: 2013.01.11 11:43:26 -05'00'

WARNING

Follow your internal safety procedures.

PROCEDURE

1.1. Ensure the proper positioning of the clamp on the hoses according to the specifications in Figure 1. The clamp must be over the hose, perpendicular to the hose/piping assembly, at a minimum of 1/16 inch (1.6 mm) from the end of the hose, and before the fitting/piping bead. See Figure 2 for the installation steps.

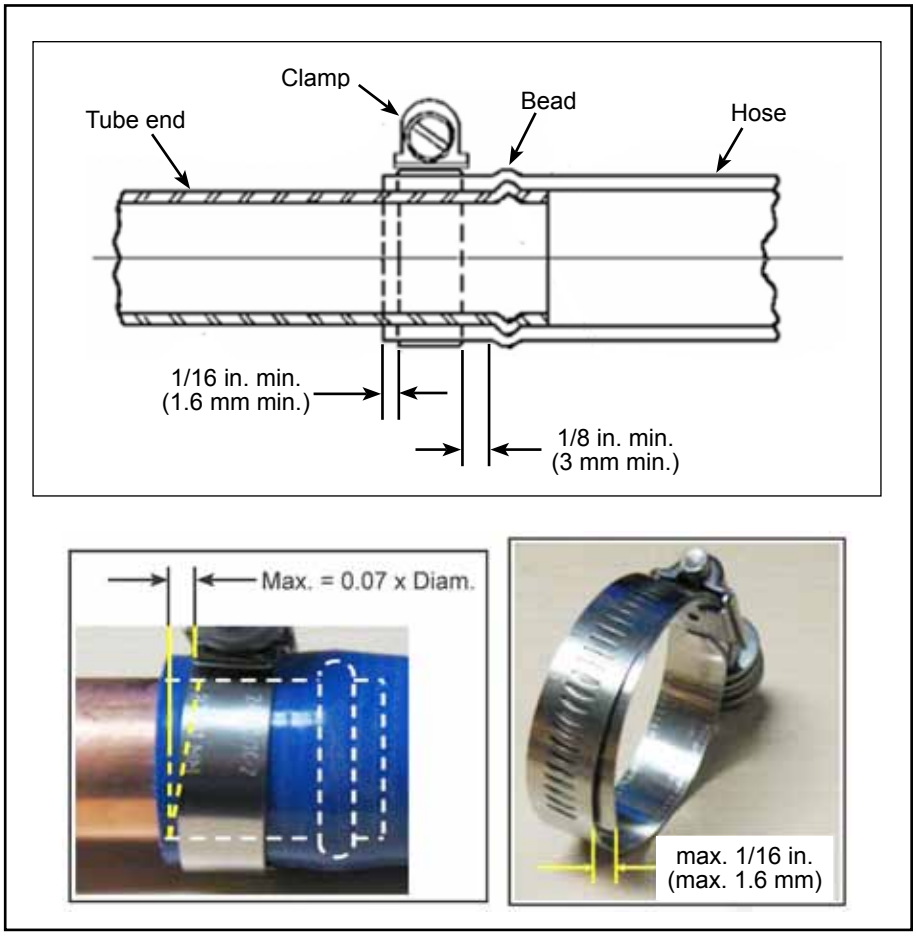
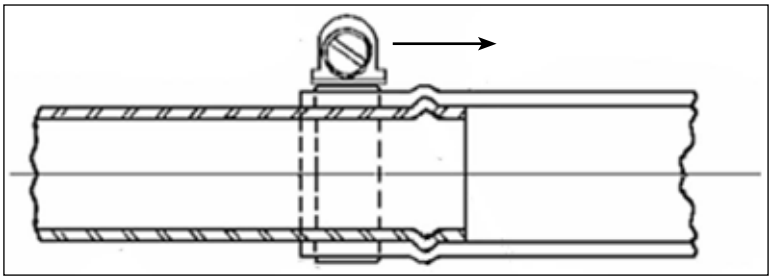
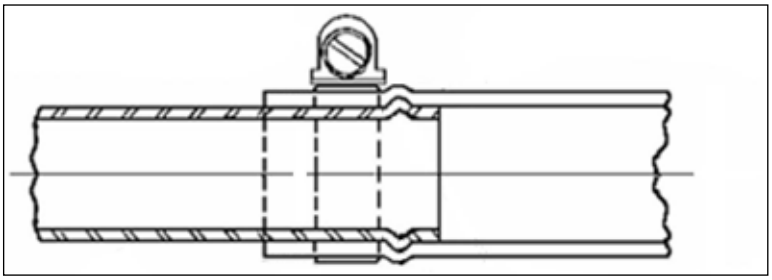


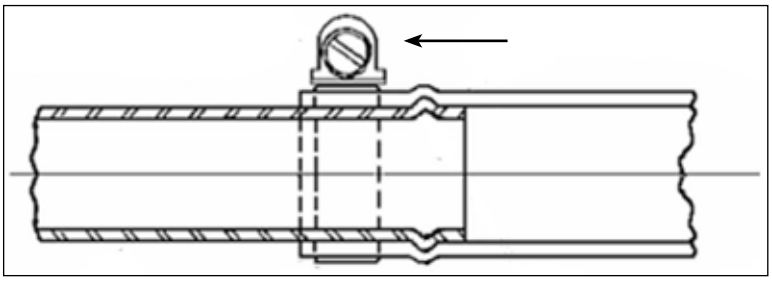
Figure 1 - Specifications for the Installation of Breeze Clamps



Step 1: Place the clamp on the hose and tighten until you feel a slight resistance while moving the clamp along the hose...



Step 2: ...but not able to go further than the beginning of the bead.



Step 3: Move the clamp back at least 1/8 in. (3 mm). Make sure there is at least 1/16 in. (1.6 mm) from the edge of the hose to the edge of the clamp.

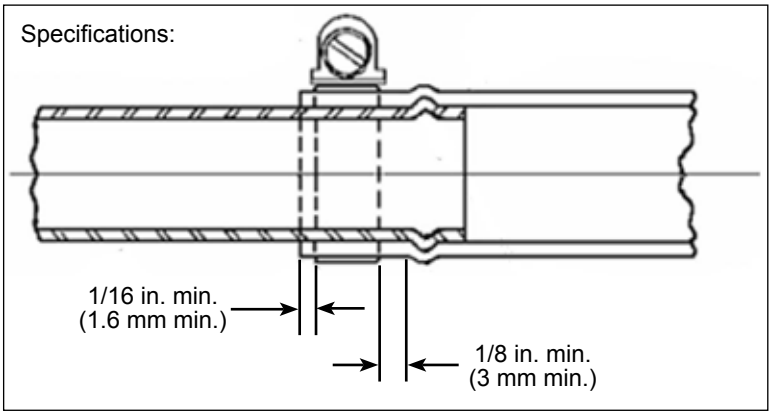


Figure 2 - Steps for the Installation of the Clamps

NOTE

Never use an impact wrench to tighten the clamps. It is recommended to use a pneumatic ratchet wrench or power tools tensor.

1.2. Tighten Belleville-type breeze clamps according to the values indicated in Figure 3.

Screw length	Tightening torque	
	Initial*	Retorquing**
1 ⅞ in. (47,5 mm)	66 ± 4 lb-in. (7,5 ± 0,5 N•m)	35 ± 2 lb-in. (4 ± 0,25 N•m)
2 ½ in. (63,5 mm)	115 ± 9 lb-in. (13 ± 1 N•m)	62 ± 4 lb-in. (7 ± 0,5 N•m)

* If a clamp was loosened to be repositionned, apply the initial torque, not the retorquing value.

** Retorquing corresponds to a torque value of up to a maximum of 50% of the initial torque in order to avoid damage to the silicone hose.

Figure 3 - Torque Required for Belleville-Type Breeze Clamps

1.3. After tightening perform a visual inspection of the ‘’Torque check extension’’ (Figure 4). Without confirming the value of the torque applied, the clamp is tightened when the extension is out of the cylnder and the Belleville washers are almost flat.

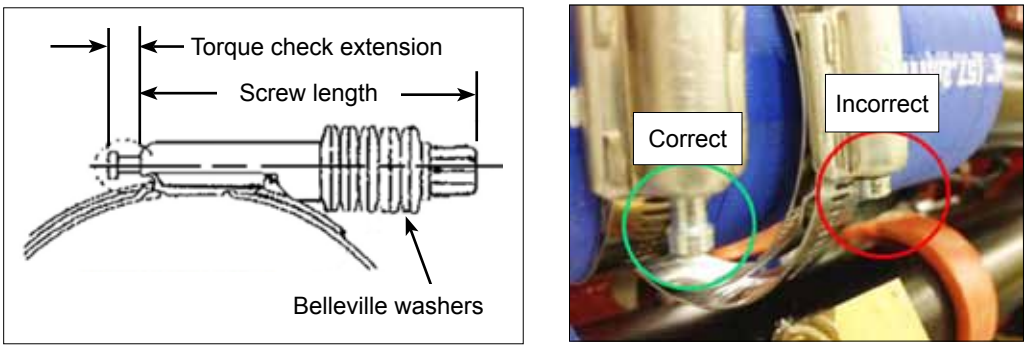


Figure 4 - Torque Check Extension Visual Inspection

1.4. Tighten the Aero-Seal and Power-Seal-type breeze clamps according to the values indicated (Figure 5). ❖

Tightening torque	
Initial*	**Retorquing****
35 ± 4 lb-in. (4 ± 0,5 N•m)	18 ± 2 lb-in. (2 ± 0,25 N•m)

* If a clamp was loosened to be repositionned, apply the initial torque, not the retorquing value.

** Retorquing corresponds to a torque value of up to a maximum of 50% of the initial torque in order to avoid damage to the silicone hose.

Figure 5 -Torque Required for Aero-Seal and Power-Seal-Type Breeze Clamps (5/16 in. or 8 mm)