

Subject: Sensor Band Installation Procedures, Hex Driver and Spacer Gauge Tools

Reference : VF-100, GVF-100 VF/GVF-100 Installation Manuals Section 7.5 Sensor Band Installation

Engineering Change Order E05-0075 released sensor bands with larger attachment rails to production. This change applies to sensor bands 18-inch diameter and larger.

The following table provides guidance for selecting the appropriate spacer gauge block for initial tightening of the sensor band as well as the hex driver size needed for tightening the screws.

Sensor Band P/N	Spacer Gauge P/N	Socket Head Screw Hex Size (inch)	Band Attachment Rail Size (Ref)
20380- ALL SIZES	20143-01	7/64	1/8 x 3/8
20409- ALL SIZES	20143-02	7/64	1/8 x 3/8
20690- ALL SIZES	20143-04	5/32	1/4 x 1/2
20686- ALL SIZES	20143-04	5/32	1/4 x 1/2

Table 1Gauge Block and Screw Size Table

The sensor band screw tightening procedure is changed such that only <u>one tightening</u> sequence of the sensor band screws using the spacer gauge is performed.

The sensor band installation procedure found in Section 7.5 and starting on page 7-5 of the manuals is changed to read as follows:

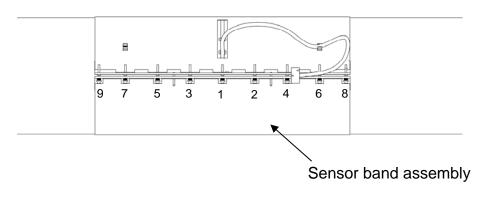
Carefully start threading the screws into their mating holes using the hex driver until each screw is engaged about 2 turns. Once all screws are engaged, make final positioning of the sensor assembly with respect to pipe weld seam or desired orientation on the pipe.

Start with the center most screw and tighten screws, alternating from side to side, 3 - 4 turns at a time. Refer to Figure 1 below for the screw tightening sequence. **Note:** Repeat the tightening sequence only until the Belleville disc springs on the screws begin to compress.

Priority Code:				
1	Safety issue or system will not function	2	Intermittent problem causing system crash	
3	Erratic data/readings	4	Added product feature	
5	Product enhancement			

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	SONARtrac® Technical Bulletin		
	Subject: Sensor Band Installation	TB006 Rev: 01	
X CIDNA	Subject: Sensor Band Installation Procedures, Hex Driver and Spacer	Priority: 5	
	Gauge Tools	Page 2 of 4	





Further tightening of the sensor band screws is made while using the sensor band spacer gauge furnished with the sensor band. The spacer gauge is used to set the compression on the Belleville washers referred to above. Refer to Table 1 for the appropriate spacer gauge and hex wrench size based on sensor band part number.

Using the sensor band screw tightening sequence shown in Figure 1, insert the sensor screw spacer gauge over the Belleville washers on the middle sensor screw assembly and tighten it such that it is snug but the gauge can still be removed. **Note:** Ensure the spacer gauge is perpendicular to the attachment rail to ensure proper tightness. Remove the gauge, move to the next sensor screw, and repeat the tightening on each of the sensor screws. <u>Tighten each screw only once</u>. Do not continue to retighten each screw using the gauge.

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SONARtrac® Technical Bulletin

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Final sensor band screw tightening is as follows:

A. For sensor bands sized for 6" diameter and smaller pipe:

Tighten screws #1-7 an additional one-half turn in the numbered sequence given in Figure 7. Do not tighten screw #8 & 9 (screws on either end of the sensor band).

B. For sensor bands sized for 8" diameter and larger pipe:

Starting at screw #1 in Figure 7, tighten each screw an additional one-half turn in the given numbered sequence.

Once all nine screws have been tightened, tighten each screw an additional one-half turn in the given numbered sequence.

Once all nine screws have been tightened the second time, tighten screws #1-7 an additional one-half turn in the given numbered sequence.

The changes noted here will be incorporated into the next revision of the installation manuals.

For any sensor band not listed in Table 1, or if there are any questions, please contact CiDRA Customer Support at 203-265-0035 or <u>customersupport@cidra.com</u> for further information.

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SONARtrac® Technical Bulletin

Subject: Sensor Band Installation Procedures, Hex Driver and Spacer Gauge Tools TB006 Rev: 01 Priority: 5 Page 4 of 4

Document Change History

Date	Revision	Changed By	ECO #	Description of Change
03/06/06	01	R. Markoja	E06-0024	Initial Release

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