Class 1 IDEX CORPORATION
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PRODUCT / SERVICE BULLETIN

		BULLETIN#	0003
		REVISION	A
PRODUCT	102714 – Paddlewheel Flow Sensor	PAGE	1 OF 3
SUBJECT	Incorrect Alignment of Flow Sensor with Actual Flow	DISTRIBUTION	X INTERNAL / EXTERNAL

1 INITIATION

DATE : **01/27/2006**
WRITTEN BY : Anthony Gleaton
APPROVED BY : Alex Kindt
PRODUCT MANAGER : Ron Ewers
CUSTOMER SERVICE MANAGER : Dick Smith
REFERENCES : n/a

2 PROBLEM STATEMENT

Due to recent changes on the Paddlewheel Flow Sensor (p/n 102714), the flow sensor can potentially be installed backwards, which may result in inaccurate flow output to other electronic components. This product bulletin outlines steps that should be taken to allow correct orientation of the flow sensor to the flow.

3 TECHNICAL DESCRIPTION OF ANOMALY

The recent modifications to the Paddlewheel Flow Sensor lengthened one end of the edge that surrounds the actual paddlewheel (see Figure 1). The modification to the unit improved the flow sensor's ability to accurately measure lower flow rates. The flow sensor is orientated using the locating pins on both the flow sensor and the flow sensor mounting ring. Consequently, the modification now requires a specific orientation of the flow sensor for it to accurately measure the flow rate. Currently, some Class 1 flanges and manifolds do not allow for the flow sensor to be installed in the proper orientation. Thus, if the unit is installed using the locating pins on these parts, the flow sensor may not operate correctly.

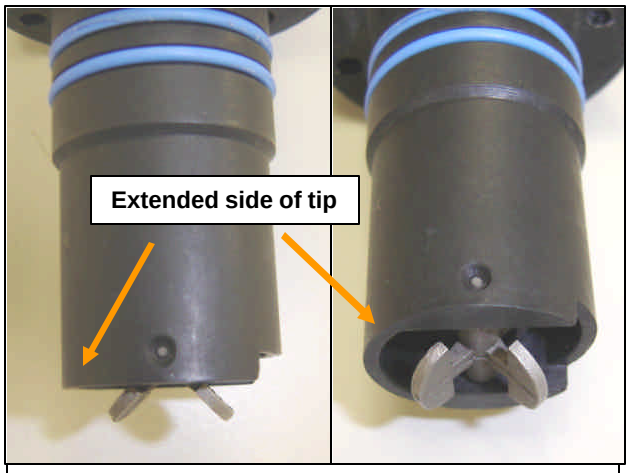

Figure 1: Paddlewheel Flow Sensor Tip Revision

4 IDENTIFICATION OF ANOMALY

If your Paddlewheel Flow Sensor meets <u>any</u> of the following criteria, continue to Section 5:

- Serial number 010248 and higher
- Shipped after January 2005
- Part number on label reads "102714A"
- Triangular notch is visible (see Figure 2)

If <u>not</u>, <u>no further action</u> is required.

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5 REMEDIES

After reviewing Section 4, and determining that you are using a recent Paddlewheel Flow Sensor, a final verification must be performed. If you have removed the flow sensor, replace it back into the flange or manifold. Find the small, triangular notch on the flow sensor (see Figure 2). *This notch should point in the direction of flow.* If the notch is pointing <u>against the flow</u>, you should <u>proceed with the modification</u> outlined below.

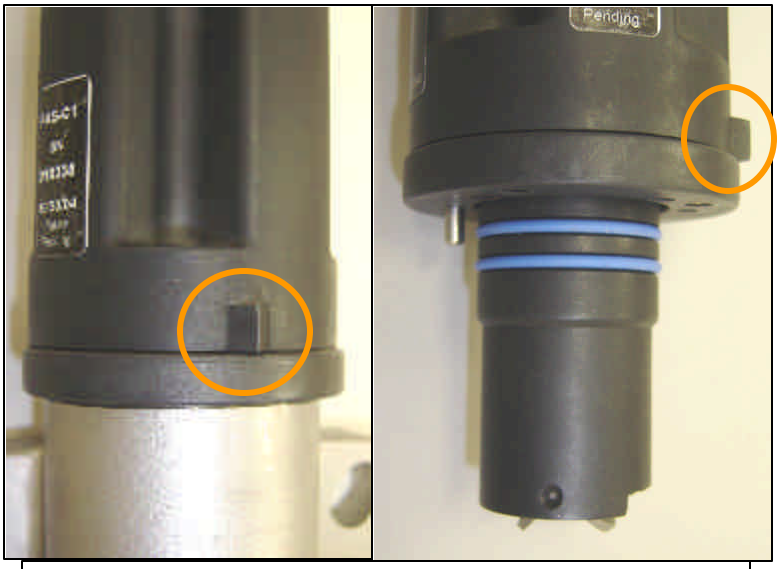

Figure 2: Paddlewheel Flow Sensor Triangular Notch

Tools required for the flow sensor modification:

1. Pliers
2. 7/64” Allen wrench

Modification Steps:

1. Remove <u>only</u> the Paddlewheel Flow Sensor from the flange or manifold. <u>Be sure to keep all four (4) socket head caps screws and four (4) internal tooth lock washers.</u> (It is not necessary to remove the flow sensor’s mounting ring.)
2. Using a pair of pliers, remove the small, steel pin from <u>only the flow sensor</u> (see Figure 3). The pin will no longer be required and can be discarded.

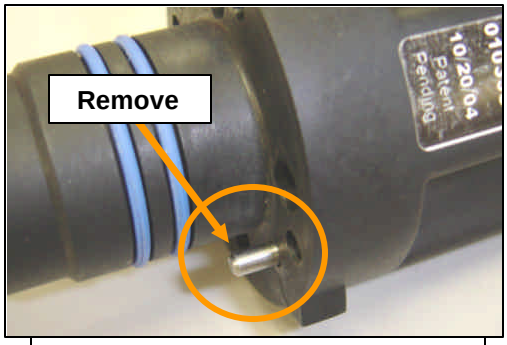

Figure 3: Steel Pin on Flow Sensor

3. Fasten the flow sensor to the mounting ring:
   a. Orient the flow sensor so that the *triangular notch is pointing in the direction of flow* (see Figure 4).
   b. Align the four (4) holes of the flow sensor with the threaded brass inserts on the mounting ring.
   c. Use the 6-32 x ¾” socket head caps screws & the #6 internal tooth lock washers to fasten the flow sensor to the mounting ring.
4. The flow sensor is now mounted in the proper orientation to the flow on the flange/manifold.

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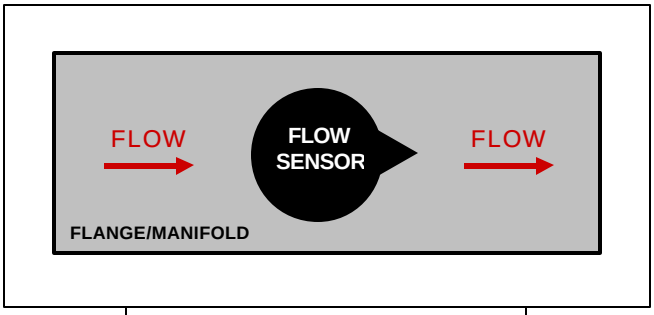

Figure 4: Correct Flow Sensor Orientation on Flange/Manifold

REV	BY	DATE	DESCRIPTION
A	AJG	01/27/2006	Initial Release