 TRACKPOINT SYSTEMS	DRAWING NO		REV
	WI 005-153-502		1
	APPROVAL		DATE
	ISSUER:	WRC	2/24/11
	ENGINEERING:	BAS	2/24/11
Installation Instruction Tr/IPSnet™ Refrigeration Temperature Sensor	PRODUCTION/MATERIAL:		
	QA APPROVAL:		

REVISION HISTORY

LTR	DESCRIPTION	DATE	APPROVED
1	Preliminary Release	2/24/11	WRC

1. Purpose / Scope

1.1. This work instruction defines the methods, materials and processes used to install TrackPoint Systems (TPS) Trailer Inventory Protection System (Tr/IPS™) Refrigeration Temperature Sensor. This sensor shall be installed as part of a Tr/IPS™ Asset management system and requires the use of a Tr/IPS™ Master Control Unit to provide communications for the sensor.

1.2. Responsibility

1.2.1. The customer is responsible for following this instruction during the installation of the referenced product. TPS manufacturing / process engineering is responsible for generating and maintaining this instruction.

NOTE:

Failure to follow this instruction will void the product warranty.

1.3. Following the installation conditions and procedures, in the order indicated in this instruction, are necessary to ensure the Tr/IPS™ Temp Sensor creates a secure bond to the wall of the trailer.

1.3.2. This Procedure shall be used for installations on Fiberglass or other types of composite refrigerated trailers.

1.3.3. Failure to follow this installation instruction could result in the Tr/IPS™ Temp Sensor not operating properly. Please call TPS Customer Service before making any deviations from this Installation Procedure.

TPS Customer Service

615-469-5152

support@trackpointsystems.com

1.3.4. Contact TPS prior to any deviations from the installation of the Tr/IPS™ Temp Sensor Unit described in this instruction. **TPS will not be responsible for any loss or damage caused by improper installation.**

2. Reference Documents

2.1. WI 158-3377 Tr/IPS™ Website Application Instructions

3. MATERIALS

- 3.1. Medium Duty abrasive pad (3M Scotch-Brite Pad #9650 or equivalent)
- 3.2. Clean, lint-free towels or paper towels
- 3.3. 50% to 70% Isopropyl Alcohol and water solution - (3M Prep-Solvent 70 or equivalent)
- 3.4. Substrate Primer (3-M #94 or equivalent)

4. TOOLS

- 4.1. 6' step ladder as needed
- 4.2. ¾" to 1" wide soft bristle brush as needed
- 4.3. 1" wide Masking Tape (or equivalent)
- 4.4. Portable Drill and bit for # 6 sheet metal screw
- 4.5. Disc magnet

5. INSTRUCTIONS

- 5.1. Recommended Location for Temp Sensor Mounting location is near the upper edge of a side wall near the back of the trailer. The location should be selected to provide data from the most common area for temperature variation in the trailer or compartment. It should not be in the direct air path from the cooling system. Mount the Sensor as shown in Figure 1:

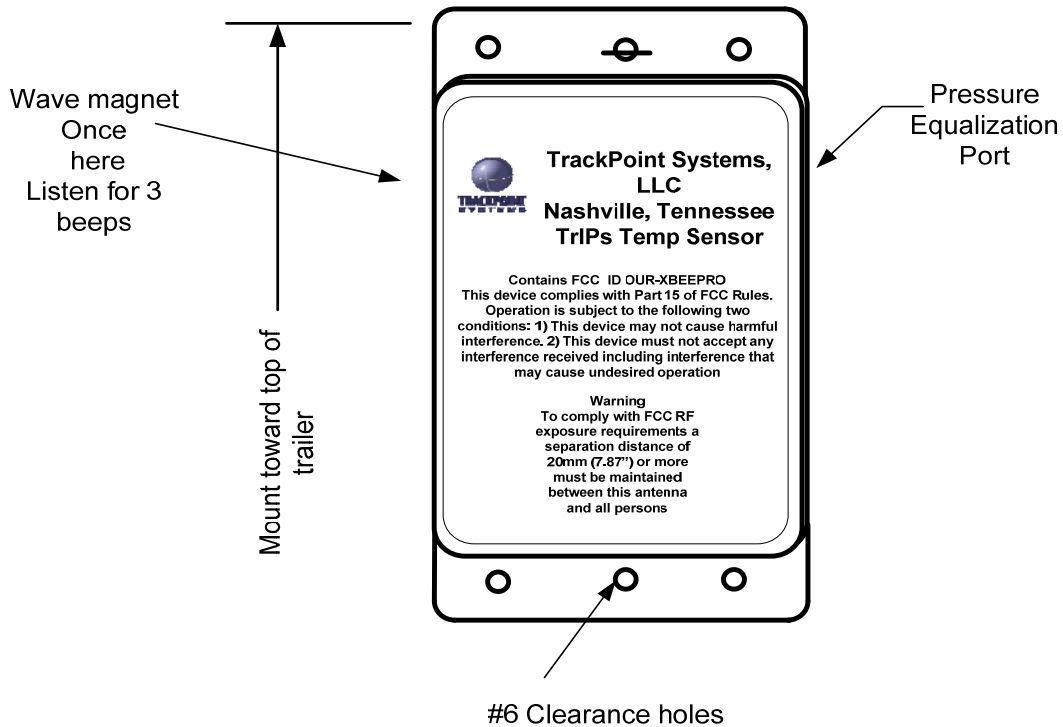


Figure 1

5.2. The sensor is typically mounted using both #6 panhead sheet metal screws into a trailer side wall rib and the tape on the back of the sensor box. Please note the tape will not adhere to Kemlite or similar plastic unless the wall is above 60°F, which necessitates the use of screws as well. Install one screw in the top flange and one in the bottom flange as a minimum.

5.3. Surface Preparation:

5.3.1. Select the location for mounting and (optional) outline the area with masking tape or marker. The dimensions of the mounting area are 5.5" x 3.5".

5.3.2. Hold the Sensor in position and mark the location of the mounting screws. Drill pilot holes.

- 5.3.3. Clean the area where the tape (see Figure 2) will be applied using the 50-50 IPA and water solution and a clean lint free towel. Ensure any dirt, film, oil, wax, or other contaminants are removed from the mounting area. Allow the surface to dry thoroughly before abrading the surface.
- 5.3.4. Abrade the cleaned area with the Scotch-Brite pad or equivalent where the Sensor will make contact with the trailer wall.
- 5.3.5. Again clean the abraded surface with the IPA cleaning solution and a clean towel. Repeat this step with a new clean towel until the clean towel shows no sign of any remaining contamination.
- 5.3.6. Thoroughly wipe the surface dry with another clean towel.
- 5.3.7. Apply the 3M Primer 94 (supplied in a “snap stick”) to the cleaned and abraded Sensor mounting surface. Allow the primer to dry completely.

5.4. Device Installation:

- 5.4.1. Remove the plastic film from the VHB™ tape to expose the tape adhesive surface. DO NOT touch the exposed adhesive surface or primed surface. Any contamination will degrade the VHB™ bond strength.
- 5.4.2. Carefully place the sensor in position and install the screws. DO NOT over Torque the screws.
- 5.4.3. Firmly press the Sensor module all along the VHB mounting areas back and forth several times.
- 5.4.4. Remove and discard the masking tape.
- 5.4.5. To activate the Temp Sensor wave the disc magnet (supplied) close to the side opposite pressure equalization port and listen for the unit to beep.

Do NOT hold the magnet in place for more than 3 seconds. This could turn the device off or reset the device. Simply wave the magnet close to the box wall and listen for the beep.

Do NOT wave the magnet across the side more than once without pausing for 120 seconds minimum. (Reference Figure 1.)

- 5.4.6. You will hear 5 single beeps when the Sensor is activated. If this is successful, you will hear no further beeps from the sensor.
- 5.4.7. This sensor has been paired with the MCU with an over the air firmware

revision and will not communicate in error with any other MCU's in your fleet.

6. DEVICE REGISTRATION

6.1. Provide the following information to your TrackPoint Customer Service Representative

Company Name:

Trailer Number/Asset ID:

Tr/IPS™ Serial Number:

Sensor Serial number