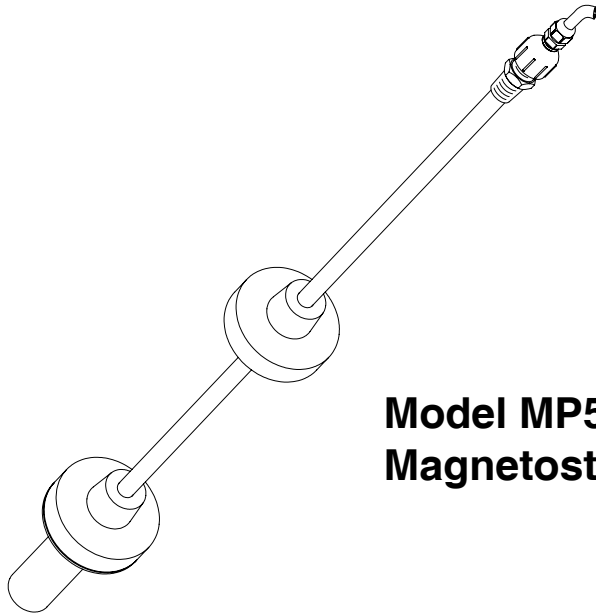


WiDAM Series MP56xSV Flex Probes*

Installation Instructions



**Model MP561SV, MP562SV And MP563SV
Magnetostrictive Flex Probes**

**For use with the
following:**

**Wireless DATA ACQUISITION MODULE (WiDAM)
USED IN CONJUNCTION WITH WIRELESS CONSOLES**

**NOTE: MP56xSV SERIES PROBES ARE NOT COMPATIBLE WITH
WIRED CONSOLES TMS2000 AND TMS3000. REFER TO THE
MP46xSV SERIES.**

*** NOTE:**

**BEFORE USING THIS BULLETIN, VERIFY MODEL NUMBER ON PROBE TAG IS MP56xSV.
"X" CAN BE NUMBER 1, 2, OR 3.**

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120 FINN COURT, FARMINGDALE, NY 11735**

TEL: (631) 293-8450

FAX: (631) 293-8533

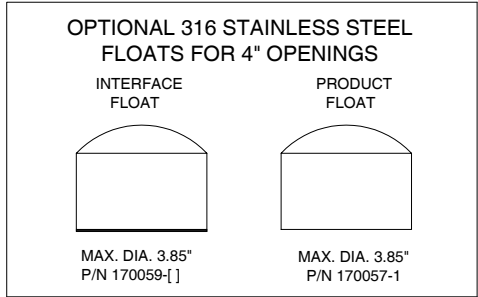
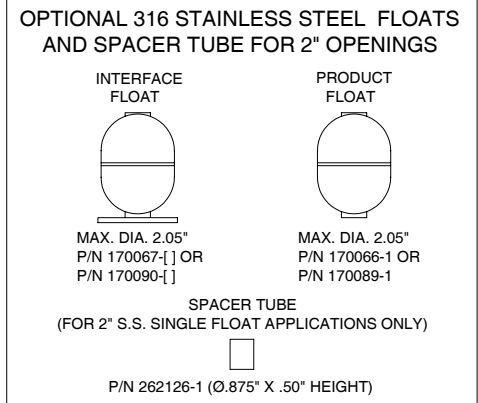
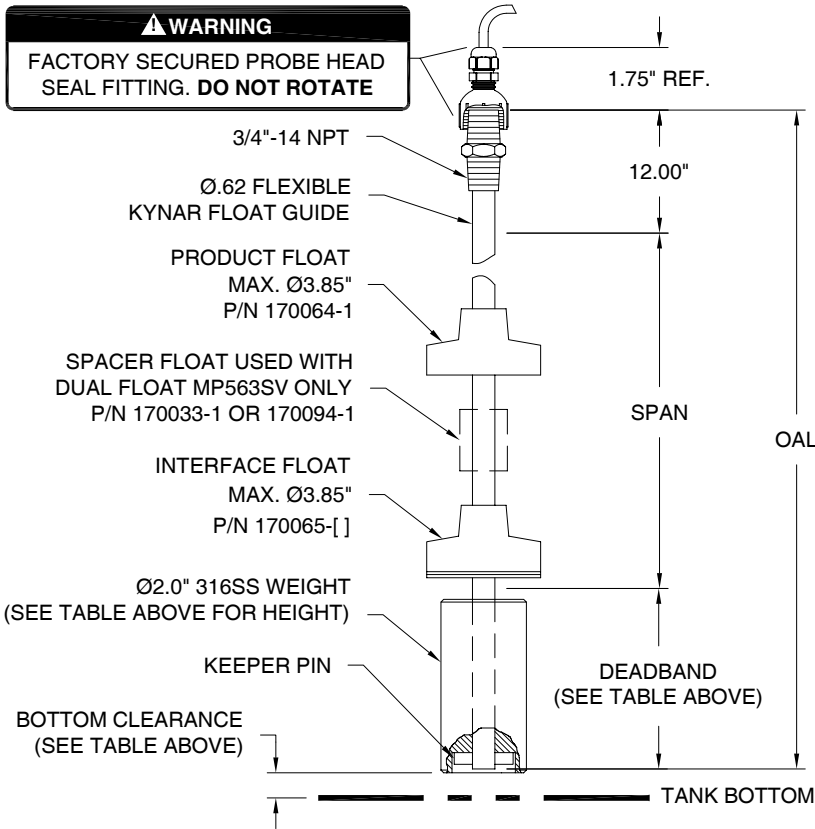
WEBSITE: www.pneumercator.com

PNEUMERCATOR TECHNICAL SUPPORT

1 (800) 209-7858

PRODUCT DESCRIPTION: MP56xSV series level gauging probes utilize proven magnetostrictive technology for accuracy and reliability. There are (3) size ranges as shown in the table below. Probes are supplied with (1) product float for product level gauging and optionally (1) interface float for bottom water gauging. Additionally the probe contains either (1) or (5) thermistors for temperature measurement.

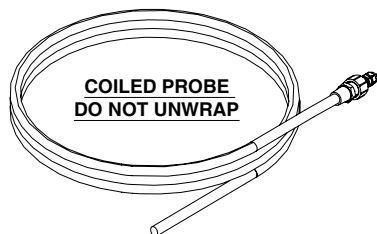
MODEL NO.	OAL (IN.) (Overall Length)	BOTTOM CLEARANCE (IN.)	BOTTOM DEADBAND DIMENSION (IN.)	WEIGHT HEIGHT (IN.)	HEIGHT (ABOVE TANK)
MP561SV	151 - 216	2.00	8.00	7.00	12 INCHES MINIMUM SEE PAGE 4
MP562SV	217 - 288	2.00	8.00	7.00	
MP563SV	289 - 432	3.00	12.00	11.00	
	433 - 600	4.00	14.00	13.00	



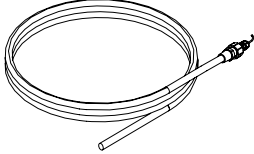
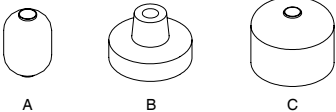


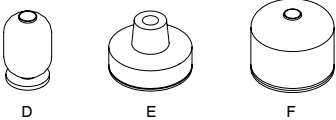



SEE BULLETIN 176 FOR OPTIONAL EXTENDED FLOATS FOR 4" OPENINGS

APPLICATIONS: The MP56xSV series flex probes are generally used for inventory management of tanks up to 50 feet tall where installation of a rigid probe is not possible due to a low ceiling clearance or chemical incompatibility.



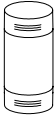

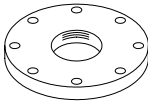
UNPACKING: All probes should be visually inspected regardless of their shipping carton physical condition at delivery. Inspect probe coils for physical damage including the inner tubes. Contact PNEUMERCATOR and the shipping company immediately if any of the parts (see page 3) are missing or damaged. During inspection and removal of the probe from the shipping carton, **IMPORTANT: DO NOT LIFT THE PROBE BY IT'S ELECTRICAL CABLE! DO NOT CUT THE TIE WRAPS AND UNCOIL THE PROBE! DO NOT BEND THE TOP OR BOTTOM 2 FEET OF THE PROBE! DO NOT REMOVE PROBE TAG!** Consult the factory if you are not sure that the parts you received are suitable for your application.



PNEUMERCATOR SUPPLIED COMPONENTS:
(NOT SHOWN TO SCALE)

	COILED PROBE DO NOT UNWRAP Overall Length (OAL) as required from table on page 2.
	PRODUCT FLOAT Either A, B or C supplied A = 2" opening or greater B, C = 4" opening or greater
	SPACER FLOAT Supplied ONLY with model MP563SV probes with both product and interface floats.
	BOTTOM SPACER TUBE For 2" S.S. single float applications ONLY.
	INTERFACE FLOAT * Either D, E or F supplied D = 2" opening or greater E, F = 4" opening or greater * IF CONFIGURED FOR DUAL FLOAT OPERATION.
	PROBE WEIGHT Length as required from table on page 2.
	KEEPER PIN
	4-HOLE CABLE SEAL BUSHING w/ (3) HOLE PLUGS (SEE PAGE 7)

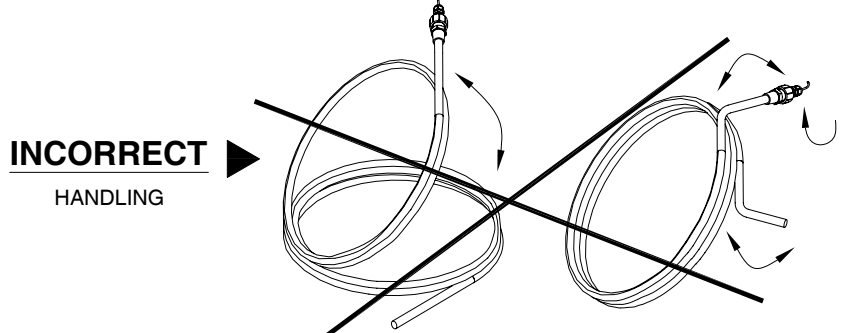
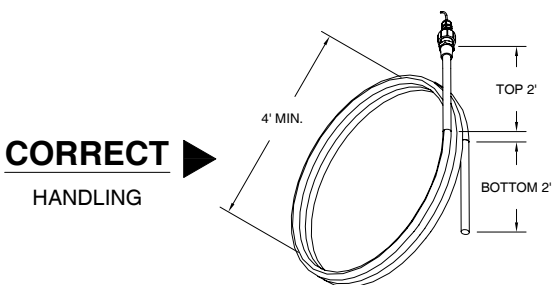
CUSTOMER SUPPLIED COMPONENTS:
(NOT SHOWN TO SCALE)

MOUNTING COMPONENTS FOR ALL APPLICATIONS	
	2" X 3/4" NPT METAL BUSHING
	2" NPT METAL COUPLING
	2" NPT (BOTH ENDS) SCHEDULE 40 METAL NIPPLE Length calculated from formula on page 4.
OPTIONAL MOUNTING COMPONENTS	
	METAL BUSHING Required ONLY for threaded openings greater than 2" NPT. Selected bushing MUST have mating 2" NPT thread for the nipple above.
	MATING METAL FLANGE For mating flange threaded openings greater than 2" NPT, an appropriate bushing must be used to connect the nipple.
NOTE: THE HEIGHT OF THESE OPTIONAL COMPONENTS ARE REPRESENTED BY "H" UNDER NIPPLE LENGTH CALCULATION ON PAGE 4.	

INSTALLATION:

WARNINGS:

- Installation is only recommended at temperatures 30°F or above. Probe damage may occur as a result of handling at lower temperatures, voiding warranty.
- DO NOT ATTEMPT TO CUT, MODIFY OR IMPROPERLY BEND THE PROBE. This will damage internal electronics causing the probe to fail, voiding warranty.
- Installation must be done by 2 qualified personnel, familiar with local wiring codes and explosion hazard electrical practices.
- While handling the probe and during installation, KEEP THE COILS PARALLEL! DO NOT LIFT ONE COIL SEPARATELY FROM THE OTHER COILS. DO NOT TWIST THE COILS. DO NOT BEND THE TOP OR BOTTOM 2 FEET OF THE PROBE.

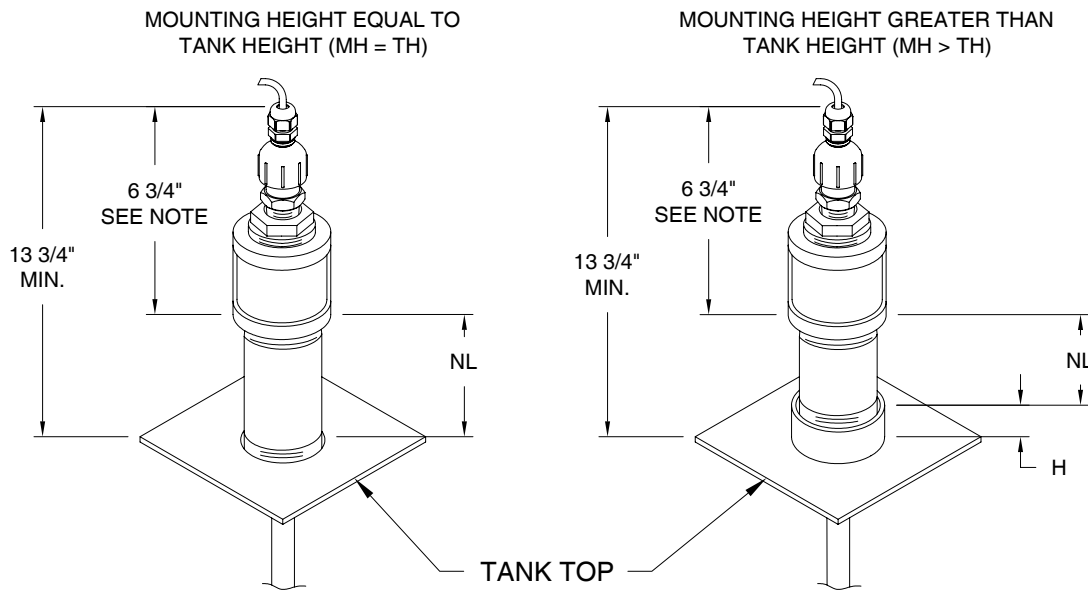


INSTALLATION CONT'D:

WARNINGS CONT'D:

- Probe mounting location should be selected to minimize effect from turbulence. **DO NOT LOCATE IN A DIRECT LINE OF INBOUND OR OUTBOUND FLOW.**
- **IMPORTANT!** Maintain adequate clearance between probe and tank sidewall. The recommended guideline is a minimum clearance of 2 feet, with 1 additional foot for every 10 feet above 20 feet.
- **DO NOT USE THE PROBE AS A MEASURING DEVICE!** For example, allowing the probe to touch the bottom of the tank then lifting it to match the bottom clearance value in the table on page 2. This method of installation will cause improper probe operation and may damage probe, voiding warranty.

1. **NIPPLE LENGTH CALCULATION:** Use the formula below to calculate the nipple length required for the correct mounting of probe. **INCORRECT NIPPLE LENGTH WILL CAUSE IMPROPER PROBE OPERATION AND MAY DAMAGE PROBE, VOIDING WARRANTY.**

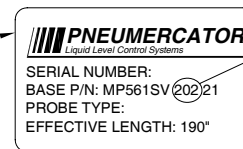


NOTE: THIS DIMENSION IS 6 3/4" WHEN STANDARD METAL 2" X 3/4" BUSHING (TYPICALLY 1 3/8" OVERALL HT) AND 2" COUPLING (TYPICALLY 2 1/2" OVERALL HT) ARE USE IN MOUNTING ASSEMBLY.

FORMULA (ALL MEASUREMENT IN INCHES) : **$NL = (L + BC + 8) - MH$**
 This formula assumes a 5/8" thread engagement on each end of the nipple.

WHERE: NL = Nipple Length
 L = Effective Probe length (see probe tag)
 MH = Tank mounting height measured from inner bottom to top of threaded opening or TH + H.
 TH = Tank height measured from inner bottom to tank roof.
 H = The height from top of tank to where nipple will be installed.
 BC = Probe bottom clearance from table on page 2.

PROBE TAG EXAMPLE
 (BOTTOM SECTION)



DO NOT USE
FOR NIPPLE
LENGTH
CALCULATION

NIPPLE LENGTH CALCULATION EXAMPLE 1:

L (from probe tag) = 407" MH = 403"

BC (from table on page 2) = 3"

NL = (407 + 3 + 8) - 403 = 15"

NIPPLE LENGTH CALCULATION EXAMPLE 2:

L (from probe tag) = 525" TH = 512" H = 5"

BC (from table on page 2) = 4" MH = 512 + 5 = 517"

NL = (525 + 4 + 8) - 517 = 20"

INSTALLATION CONT'D:

2. **TRANSPORT PROBE AND ACCESSORIES:** With tie wraps still in place, transport the flex probe and the other components to the top of the tank.

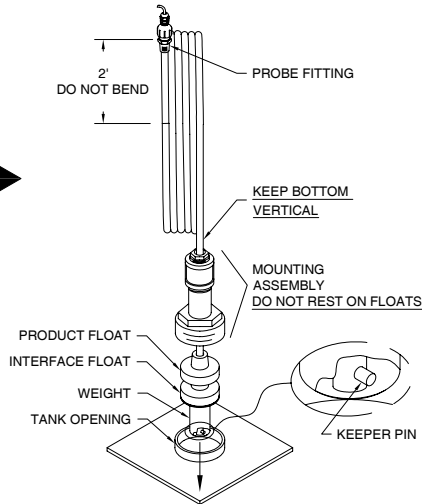
⚠ CAUTION

It is the INSTALLERS RESPONSIBILITY to ensure that they are adequately supported when handling the probe on top of the tank. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY, PROPERTY LOSS AND EQUIPMENT DAMAGE.

3. **INSTALL ACCESSORIES:** Rest the coiled probe over your shoulder. Let the second installer cut ONLY the tie wrap at the end of the tube with a hole through it, marked #1. Keeping the probe bottom vertical, install the appropriate components on the end of the probe as shown, making sure to support the end of the probe to keep it from twisting. DO NOT BEND THE BOTTOM 2 FEET OF THE PROBE.

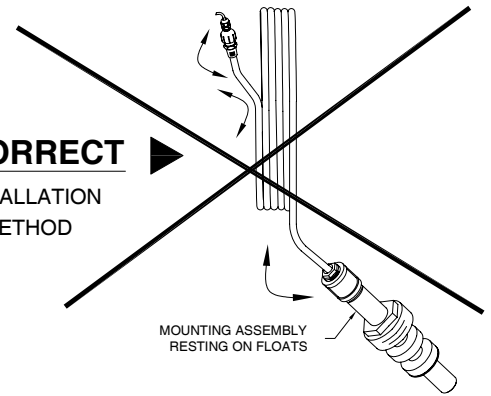
CORRECT

INSTALLATION
METHOD



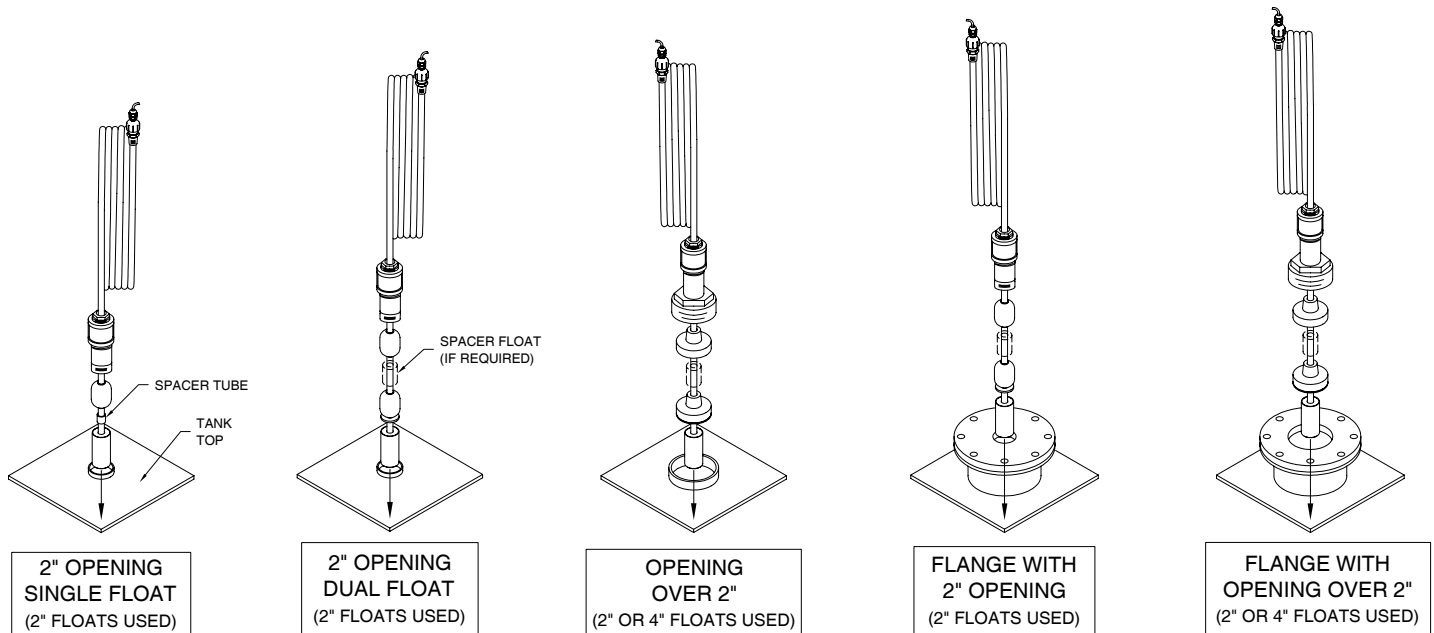
INCORRECT

INSTALLATION
METHOD



NOTE: SEE BOTTOM OF PAGE FOR VARIOUS PROBE ASSEMBLY ILLUSTRATIONS.

4. **INSTALL PROBE:** With the probe still coiled and resting on your shoulder and the components supported by the second installer, carefully feed the weight and floats through the tank opening, cutting the tie wraps in number sequence only when necessary. THE TOP 2 FEET OF THE PROBE CONTAINS ELECTRONICS. DO NOT BEND. DO NOT REMOVE PROBE TAG!
5. **SECURE PROBE:** Screw the mounting assembly into tank opening, then the probe fitting into the mounting assembly.



WIRING:

⚠ WARNING

Refer to TMS installation manual or wiring drawing 50440 for WARNINGS and CAUTIONS before proceeding. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY, PROPERTY LOSS AND EQUIPMENT DAMAGE.

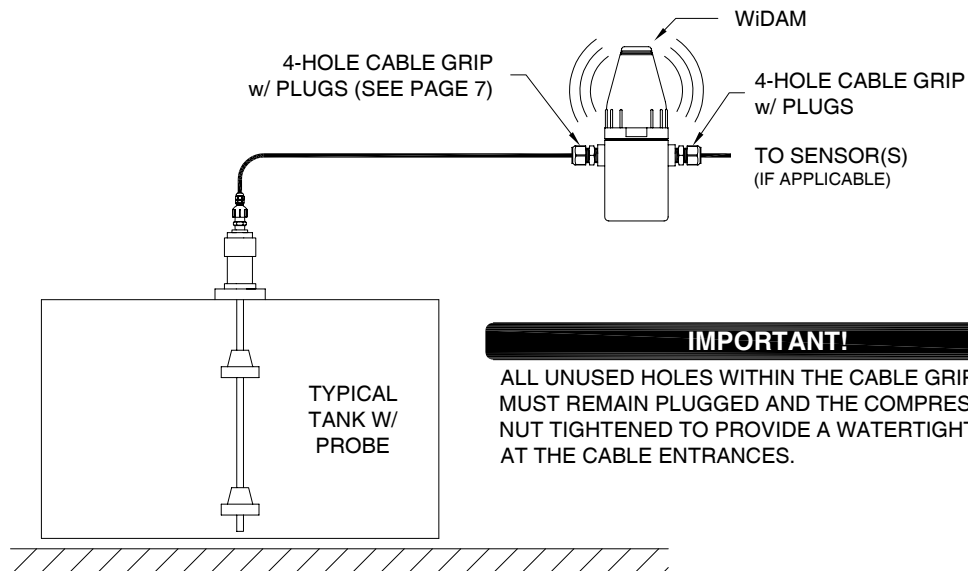
GENERAL SYSTEM OVERVIEW



▲
NON-HAZARDOUS AREA

HAZARDOUS AREA
CLASS I, DIVISION 1,
GROUPS C AND D
CLASS I, ZONE 0, GROUP IIB

▼



IMPORTANT!

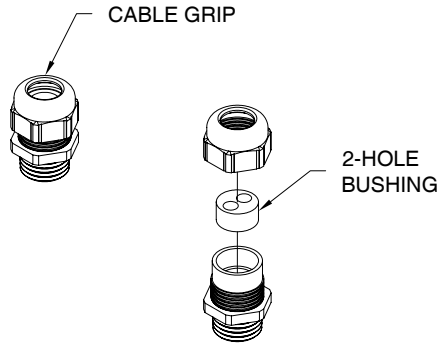
ALL UNUSED HOLES WITHIN THE CABLE GRIPS MUST REMAIN PLUGGED AND THE COMPRESSION NUT TIGHTENED TO PROVIDE A WATERTIGHT SEAL AT THE CABLE ENTRANCES.

WIRING CONT'D:

4-HOLE CABLE GRIP ASSEMBLY FOR PROBE: THESE ASSEMBLY STEPS APPLY ONLY IF YOUR WIDAM IS EQUIPPED WITH A 2-HOLE CABLE GRIP. FOLLOW STEPS 1 AND 2 BELOW.

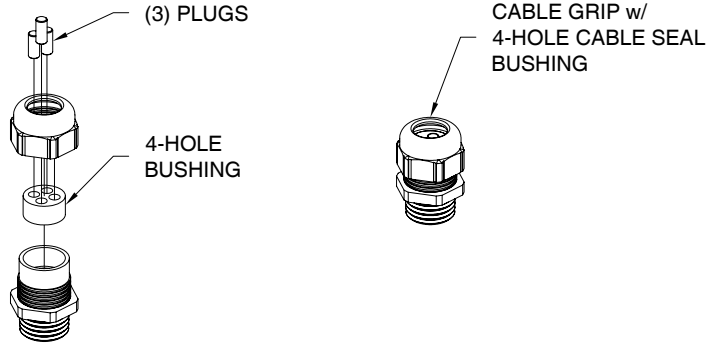
STEP 1

REMOVE STANDARD 2-HOLE BUSHING

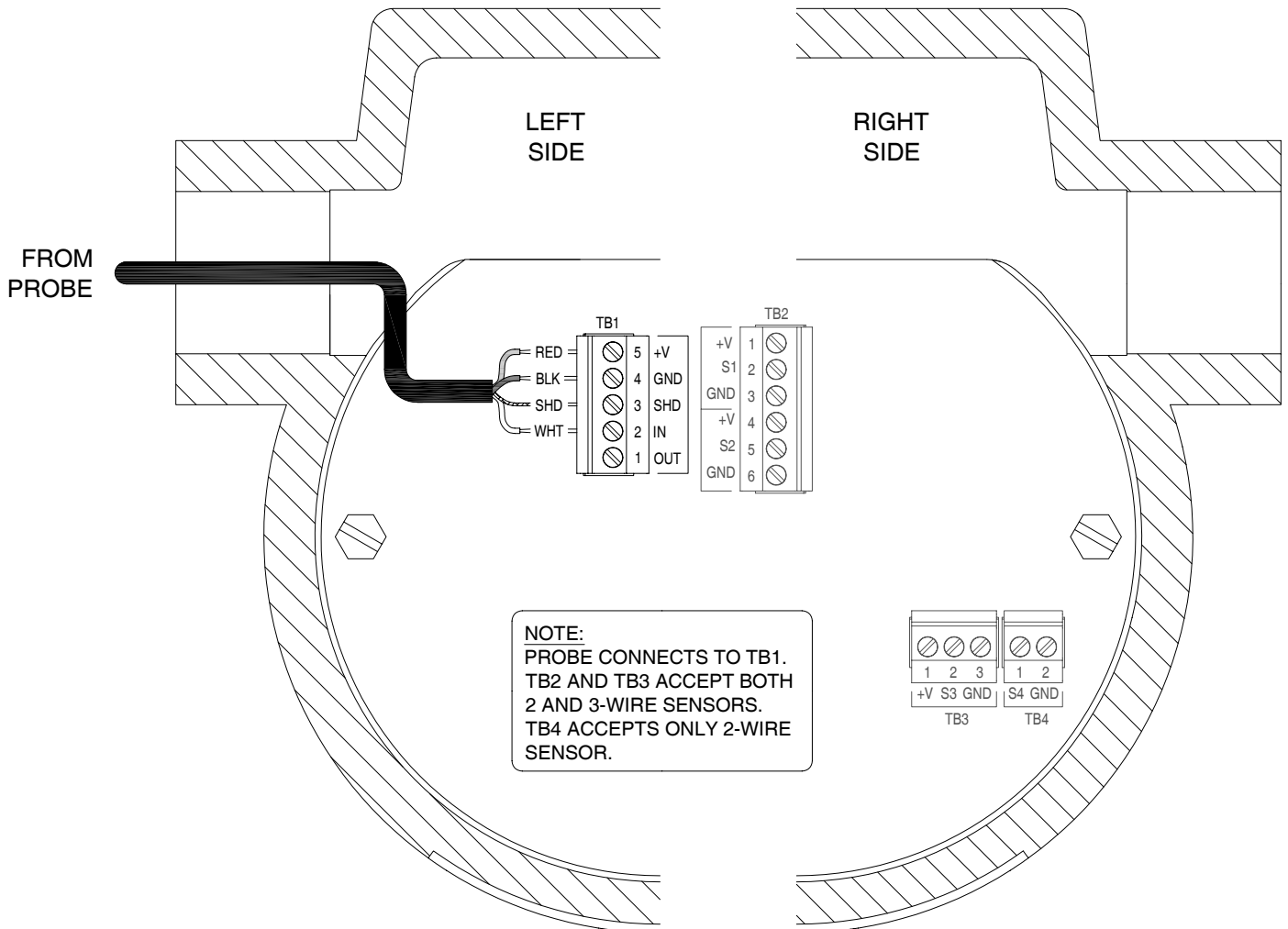


STEP 2

INSTALL 4-HOLE BUSHING AND PLUGS AS REQUIRED.



WIDAM INTERNAL TOP VIEW (DIVIDED INTO TWO SIDES FOR CLARITY)

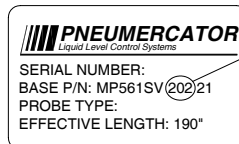


PROGRAMMING: Information necessary for programming this probe can be found on the tag attached to the probe. The top section has certification information and the bottom has information needed to program the wireless TMS console to communicate with this probe. Copy the information from the tag on the probe onto this sheet and onto the tank worksheet in the TMS Operation Manual for referencing when programming the TMS. USE THE EFFECTIVE LENGTH GIVEN ON THE TAG WHEN PROGRAMMING THE SYSTEM PROBE LENGTH PARAMETER. THE "SV" ON THE PROBE TYPE IS NOT NEEDED FOR PROGRAMMING.

PROBE NAME, LOCATION OR DESCRIPTION: _____

SERIAL NO. _____
BASE P/N MP56__SV _____
Probe Type: MP56__SV
Effective Length: _____

PROBE TAG EXAMPLE
(BOTTOM SECTION)



DO NOT USE FOR PROGRAMMING