

CRANE GO REGULATOR SPARTANBURG, SOUTH CAROLINA 29303 108727	Service Assembly Manual for Vaporizing Regulators	REV. DATE: PAGE:	F 15-April-2021 1 OF 5
--	--	-----------------------------	---

REVISIONS						
REV LTR	PAGE(S) / PARA	DESCRIPTION	ECO NO.	DATE	BY	APPR.
B	ALL	See Perm Record	-	-	BM	BM
C	ALL 2 3	Convert TM from GO format to Circle Seal format. Added figure 1 per ATEX requirement. Revised figure 2 by adding item number label for clarity	19168C	03-06-05	TTN	
D	ALL	Updated Figure 1 & Figure 2 to current configuration, updated logos and added IEC/ATEX reference in paragraph 1.1	32127	7/29/2010	LJB	AHL
E	ALL	Update to current IECEx, ATEX standards	02163948	03/18/2016	JMH	PM
F	ALL	Added HBP, DH2, CV2 and updated electronics. Add Crane logo	04210693	04/15/2021	PGM	CMC

ANY CHANGES TO THIS DOCUMENT MUST BE SUBMITTED TO THE NOTIFIED IEC BODY

 SPARTANBURG, SOUTH CAROLINA 29303 108727	Service Assembly Manual for Vaporizing Regulators	REV. DATE: PAGE:	F 15-April-2021 2 OF 5
---	--	---------------------------------	---------------------------------------

SERVICE ASSEMBLY MANUAL FOR VAPORIZING REGULATOR

MODELS: HPR-2, HPR-2XW, CV, DHR, CV2, DH2, & HBP

These instructions assume a certain level of proficiency with the safe use of high pressure, and electrical current. Make sure the electrical circuits are disconnected before opening the conduit cap to prevent ignition of hazardous atmosphere. If you do not feel confident with your ability to safely work or follow written instructions in English, do not attempt to repair this product yourself. Please consult manufacturer.

1.0 INTRODUCTION

- 1.1 This procedure outlines Disassembly and Assembly instructions for Vaporizing Regulators. The models are: HPR-2, HPR-2XW, CV, DHR, CV2, DH2, and HBP. Please refer to Installation Manual 113117 for installing and removal procedures for the unit.

Note: Please look at the IEC/ATEX label to verify the equipment classification, similar to Figure 1 below. If not sure, please contact manufacturer to verify part classification.

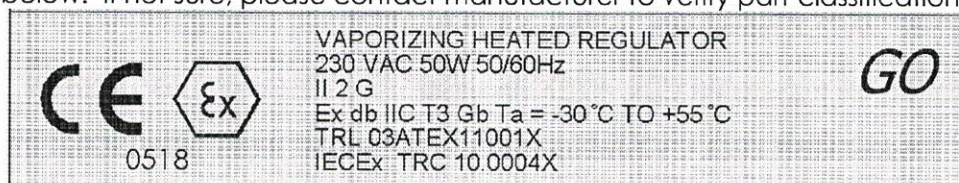


Figure 1: Typical IEC/ATEX label for Vaporizing Regulator

- 1.2 Disconnect unit from AC power supply and any pressure source; make sure all residual pressure is bled off from the regulator.

WARNING: Failure to follow this step may lead to death by electrocution.



- 1.3 Unit may be hot. Please use appropriate personal protective equipment.

1.4 **WARNING:** If this equipment is used in a manner not specified by manufacturer, the protection provided by the equipment may be impaired. This equipment is not intended only for a laboratory. No special aspects exist when integrating into systems. There are no unexpected effects resulting from special ambient or application conditions.

- 1.5 The cartridge heater and regulator assembly shall be supplied only by the manufacturer.

2.0 DISASSEMBLY INSTRUCTIONS

- 2.1 Please refer to Figure 2 during assembly and disassembly of the product.

- 2.2 Disconnect the power source.

- 2.3 Unscrew M3-0.5 Socket Set Screw (Item 1) using a Hex key Wrench.

- 2.4 Remove the Condulet Cap (Item 2) from the Condulet Box (Item 5) by turning the Condulet Cap counter clockwise.

- 2.5 Locate the Controller Board (Item 7) and the two (2) terminal screws (Item 12). Use a screw driver to remove the two (2) feed wires. Carefully remove the AC feed wires and any that is attached to the conduit. This leg of the conduit must be opened to be able to remove the cartridge heater.

ANY CHANGES TO THIS DOCUMENT MUST BE SUBMITTED TO THE NOTIFIED IEC BODY

 SPARTANBURG, SOUTH CAROLINA 29303 108727	Service Assembly Manual for Vaporizing Regulators	REV. DATE: PAGE:	F 15-April-2021 3 OF 5
---	--	---	---

- 2.6 Lift the tab on the Heater Connector (Item 11) and separate the Heater Connector from the Controller Board (Item 7).
- 2.7 Remove Controller Board (Item 7) after removing three screws. Disconnect earthing connection.
- 2.8 Remove the Hex Standoffs (2X Item 13 & Item 14).
- 2.9 Loosen and remove the two screws (Item 8) that hold the sub-plate (Item 4) onto the conduit Box (Item 5). Remove the sub-plate.
- 2.10 Carefully feed the wires of the cartridge heater (Item 9) and Heater Connector (Item 11) through the hole on the opposite side of the conduit (Item 5). Continue pulling on the wires, gradually increasing the load just until the cartridge heater breaks loose. Feed the loose cartridge heater all the way through the hole in the conduit. If the cartridge heater seizes in the assembly, the assembly with the cartridge heater at Circor must be replaced.

3.0 ASSEMBLY INSTRUCTIONS

- 3.1 Slide the new cartridge heater (Item 9) through the open leg of the conduit (Item 5). Continue inserting the cartridge heater until it is firmly seated against the bottom of the bore. Failure to do this will cause improper heating of the unit and could lead to failure of the unit.
- 3.2 Place the sub-plate (Item 4) over the wires of the cartridge heater (Item 9) and leave the cartridge heater connector (Item 11) extending up inside the conduit box (Item 5) on the side without a lug. Be careful not to crimp or pinch the wires under the plate. Pull up enough slack in the wires to facilitate the connection to the Controller Board (Item 7), but DO NOT pull the cartridge heater away from the bottom of the bore. The wires must be run under the sub-plate to prevent damaging them when the conduit cap is installed.
- 3.3 Install the Hex Standoffs (2X Item 13 & Item 14) on the sub-plate.
- 3.4 Using the two screws (Item 8), tighten the sub-plate (Item 4) onto the conduit (Item 5).
- 3.5 Connect bonding conductor to bonding screw per applicable electrical codes. Install Controller Board (Item 7) and tighten three screws.
- 3.6 Connect the cartridge heater connector (Item 11), with the tab up, to the Controller Board (Item 7).
- 3.7 Connect power source and green ground wires per Installation Manual 113117.
- 3.8 Place conduit cap (Item 2) on the conduit (Item 5), and turn the cap clockwise until it is flush.
- 3.9 Tighten the set screw (Item 1), located on the conduit cap (Item 2), clockwise until it bottom out against the Conduit.

ANY CHANGES TO THIS DOCUMENT MUST BE SUBMITTED TO THE NOTIFIED IEC BODY

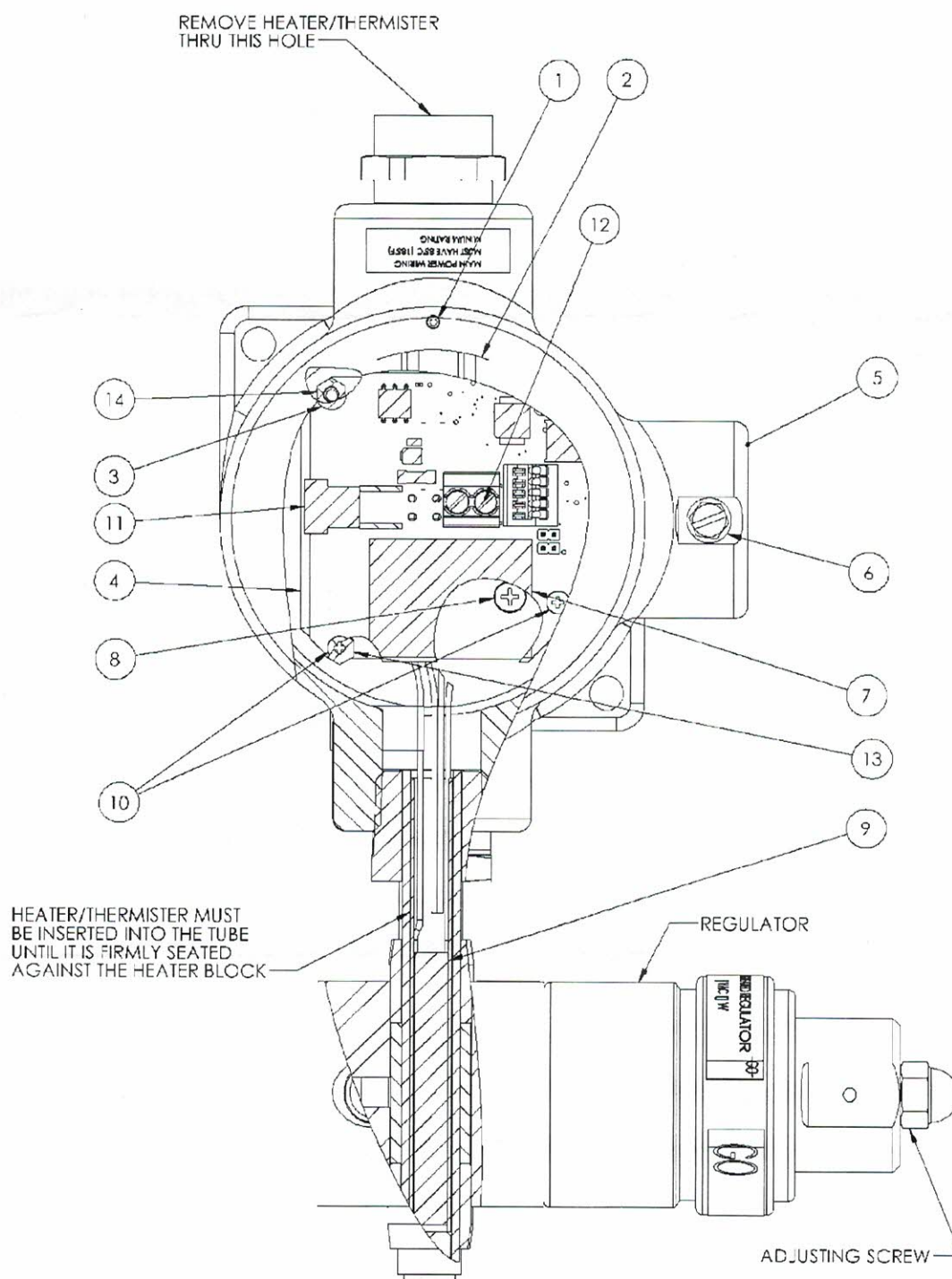


Figure 2: Partial Section View of Assembly

ANY CHANGES TO THIS DOCUMENT MUST BE SUBMITTED TO THE NOTIFIED IEC BODY

CRANE GO REGULATOR SPARTANBURG, SOUTH CAROLINA 29303 108727	Service Assembly Manual for Vaporizing Regulators	REV. DATE: PAGE:	F 15-April-2021 5 OF 5
---	---	---	---

4.0 Contact

CRANE Instrumentation & Sampling, Inc.
405 Centura Court
P.O. Box 4866 (29305)
Spartanburg, SC 29303, USA
Phone: 864.574.7966

