Raypak 1007-4007 Ho2t Track O2 Monitoring Field Installation Kit Instructions

RAYPAK SERVICE INSTRUCTIONS
HO2T™ TRACK (O2 MONITORING) FIELD-INSTALLATION KIT
FOR XVERS (POWERED BY KOR) HEATING BOILERS
MODELS 1007-4007

Contents

1007-4007 Ho2t Track O2 Monitoring Field Installation Kit

IMPORTANT NOTICE: These instructions are for use by qualified personnel specifically trained and experienced in the installation of this type of heating equipment and related system components. Installation and service personnel may be required to be licensed in some states. Persons not qualified shall not attempt to install this

equipment nor attempt repairs according to these instructions.
DANGER – SHOCK HAZARD: Make sure the electrical power to the boiler is disconnected to avoid damage to components, potential serious personal injury or death. Make sure the gas to the boiler has been shut off.
WARNING: Make sure water, gas, and power have been turned OFF before making any repairs or servicing this equipment.
SCOPE: The details of this document will provide instructions for field-installing the HO2T monitoring hardware for XVers (powered by KOR) boilers.

KIT NUMBER	KIT DESCRIPTION
100-10000529	Kit-HO2T Track (O2 Monitoring) 6″ (Model 1007)
100-10000530	Kit-HO2T Track (O2 Monitoring) 8″ (Models 1257/2007)
100-10000531	Kit-HO2T Track (O2 Monitoring) 10″ (Models 2507/3007)
100-10000532	Kit-HO2T Track (O2 Monitoring) 12″ (Models 3507/4007)

THIS KIT CONTAINS:

DESCRIPTIONS	QTY
Harness Assembly, Power/Enable/Modbus/Alarm	1
Harness Assembly, O2 Sensor	1
Vent Adapter with O2 Sensor Port	1
PC Board Bracket	1
PC Board	1
PC Board Spacer (1/4″ Nylon)	4
Oxygen Sensor	1
Cable Tie, 3-7/8″ Strap	6
Power Supply Bracket	1
Power Supply AC/DC 120 VAC/12DC 5 Amps	1
Cable-Power Adapter, O2 monitoring	1
2″ Grommet	1
Terminal Block	1
Screws, Terminal Block	4
Block-Barrier, Bridge	2
Terminal Fork Spring	10
Nutserts	2

TOOLS REQUIRED:

- Phillips Head Screwdriver

- #2 Flathead Screwdriver
- 5/16″ Nut Driver
- 2″ Step Drill Bit or Hole Saw
- Torque Wrench with 22mm Head
- 1/8″ Drill Bit
- 1/4″ Drill Bit
- Wire Stripper/Side Cutter

INSTRUCTIONS:

1. Turn off electrical power to the boiler, the breaker panel and at the boiler's power switch.
2. Turn off gas to the boiler's manual shut-off valve.
3. Release the two (2) snap fasteners to remove the front cover panel from the unit. Remove the panels and place them aside. (See Figure 1.)
4. Remove one (1) screw to open the Junction Box (J-box) cover. (See Figure 2.)
5. Using a 5/16″ nut driver, remove the two (2) mounting bracket screws that hold the existing power supply to the unit. (See Figure 3.)
6. Cut the new power supply cable approximately 1 ft. from the power box. Strip each wire approx. 3/8″. Install supplied terminal forks onto each stripped wire. (See Figure 4.)
   NOTE: The "dotted" white line on the power supply wire is the positive feed.
7. Using a 1/4" drill bit, expand the hole size for the power supply bracket on the J-box mounting plate. Install two supplied 8/32" nutserts into the 1/4″ holes created. Position the bracket over the holes and install a mounting screw into the right-side and tighten with a Phillips head screwdriver. Next, install and semi-tighten a screw into the left-side of the power supply bracket. This screw will be fullytightened once the O2 bracket is installed in Step 18.
8. Using a Phillips head screwdriver, remove the existing two wire terminal blocks (front & rear). Remove the four (4) wires from the rear terminal block. Move the front terminal block (keeping the wires attached) into the rear terminal block's hole location. (See Figure 5.)
9. Crimp supplied terminal forks onto the four (4) wires removed from the rear terminal block.
10. Install the two (2) supplied bridge jumpers at the bottom of the terminal block and the four (4) terminal forks into the upper section of the terminal block. Insert the two power supply terminal forks on top of the bridge jumpers. Using a Phillips head screwdriver, tighten all terminal connectors to secure. (See Figure 6.)
11. Using a 1/8″ drill bit, create two (2) new holes for the new wiring terminal block.
    NOTE: Be sure to only drill through the J-box mounting panel; do not drill all the way through the J-box. (See Figure 7.)
12. Using a Phillips head screwdriver, mount the new terminal block onto J-box panel using the supplied screws. (See Figure 8.)
13. Install the new Power Supply and secure in place with the mounting bracket. (See Figure 3.) Do not tighten the left-side mounting screw completely as mentioned in Step 7.
14. Remove the bottom CN1 plug from the VERSA IC board. (See Figure 9.)
15. From the CN1 plug, remove the existing brown/ orange (RS485B) and brown (RS485A) sheathed wires. From the supplied wire harness, take the brown/orange and brown sheathed wires and splice them together with the wires previously removed. Insert the connected wires back into the CN1 wire ports and tighten the set screws.

Lastly, insert the supplied harness's ground (green) wire into the outer left CN1 wire port. Insert the CN1 plug back into the VERSA IC board. (See Figure 10.)

16. Install four (4) Nylon spacers into the PC board bracket. (See Figure 11.)
17. Install the PC Board onto the mounting bracket by aligning the four (4) board mounting holes and pressing down firmly to ensure the Nylon tabs extrude outward to hold the board in place. (See Figure 12.)
18. Install the new PC Board with mounting bracket onto the Power Supply bracket screw. The screw can now be completely tightened with a Phillips head screwdriver. (See Figure 13.)
19. From the supplied wire harness, insert the (Power/ Enable/Modbus/Alarm harness) plug into the PC Board P1 port. (See Figure 14.)
20. Using a 2″ hole saw, 2″ step drill bit or 2″ hydraulic punch (if available), create a through hole into the back panel of the unit where the O2 sensor cable will be routed. De-burr the hole. (See Figure 15.)
21. Install the supplied grommet into the 2″ hole. (See Figure 16.)
22. Install the vent adapter onto the rear of the unit. Secure with hose clamp. (See Figure 17.)
23. Install the HO2T oxygen sensor into the unit's rear venting adapter, applying a tightening torque of 29 to 44 ft-lbs (±0.5 ft-lb) (40 to 60 N m) (See Figure 18.)
24. Feed the oxygen sensor wire harness through the grommet (secure the harness with zip ties to the upper existing cable bundle inside the unit).
25. Connect the oxygen sensor plug to the PC board port. (See Figure 19.)
26. Connect the opposing end of the P3 plug into the oxygen sensor's plug. (See Figure 20.)
27. See the O2 Monitoring (HO2T Track) section in the XVers with KOR Installation Manual (P/N: 241849) for proper setup, pre-start check, wiring and troubleshooting.
28. Reverse Steps 4 through 1 to bring the boiler back to operating status.

NOTE: If your boiler was manufactured before May 2023, you will need to update your touchscreen software. Scan QR Code below for update.

https://www.raypak.com/raymoteupdate/

TOUCHSCREEN UPDATE

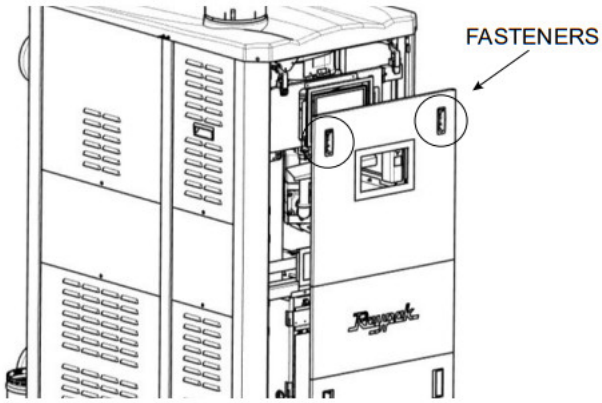

Figure 1. Front Cover Panel Removal

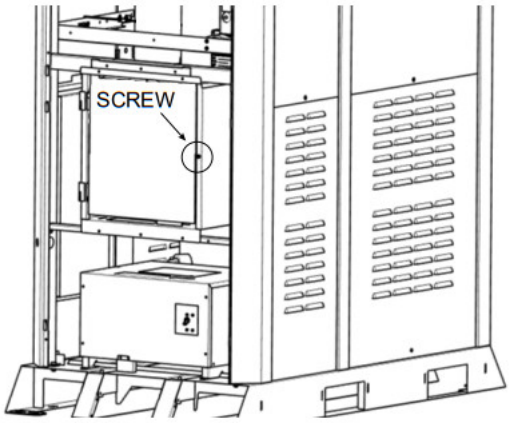

Figure 2. Removing Junction Box Screw

Figure 3. Power Supply Removal

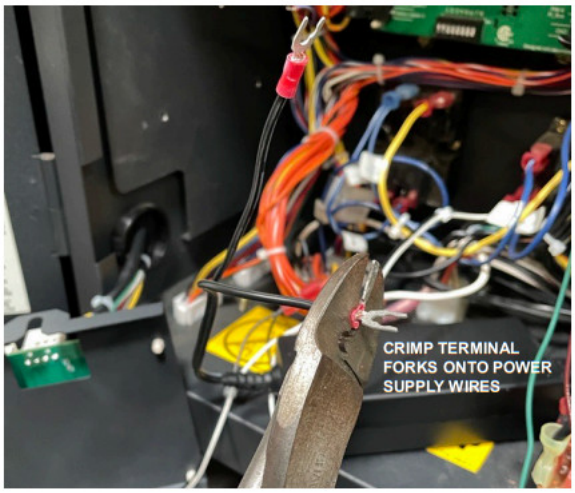

Figure 4. Crimp Terminal Forks to Power Supply

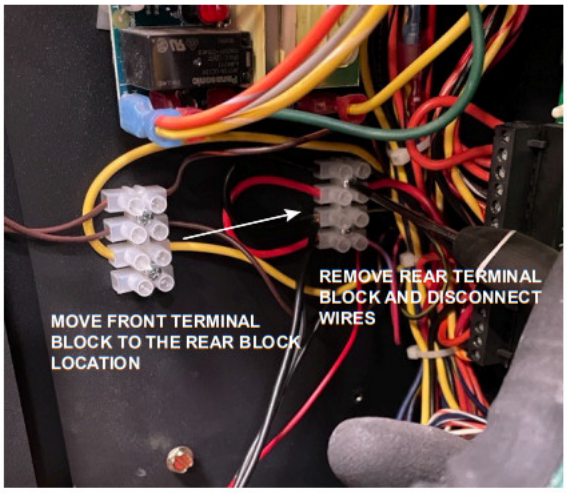

Figure 5. Relocate Terminal Blocks

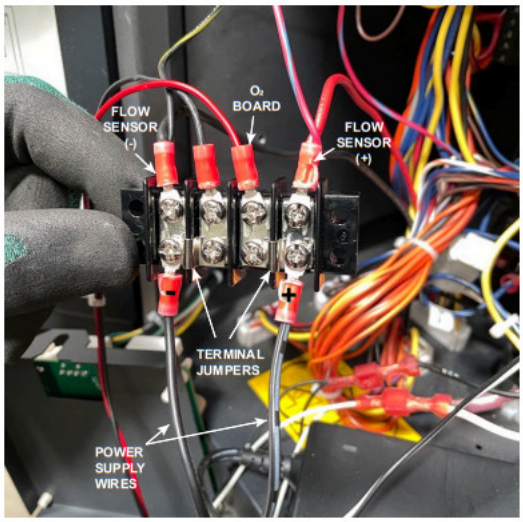

Figure 6. Replacement Terminal Block Wiring

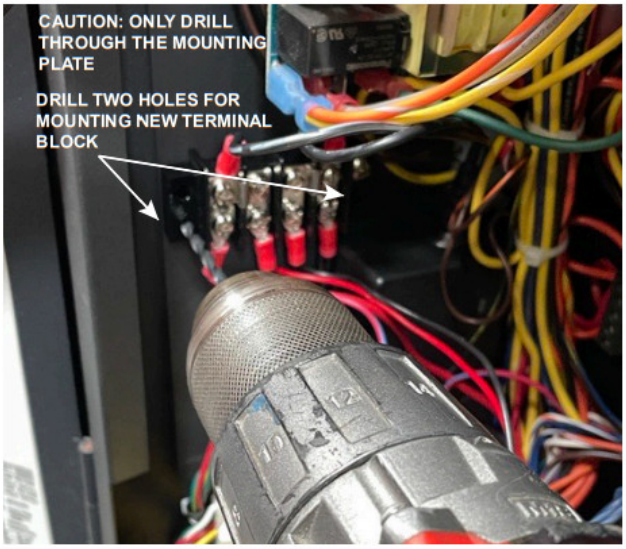

Figure 7. Drill Hole for Terminal Block

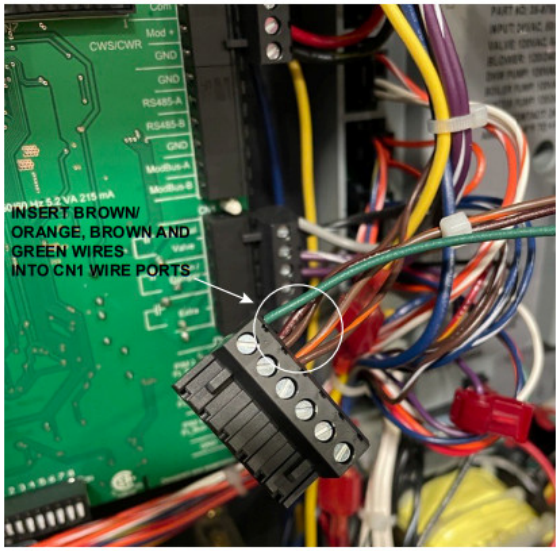

Figure 10. Install Wiring to CN1 Plug

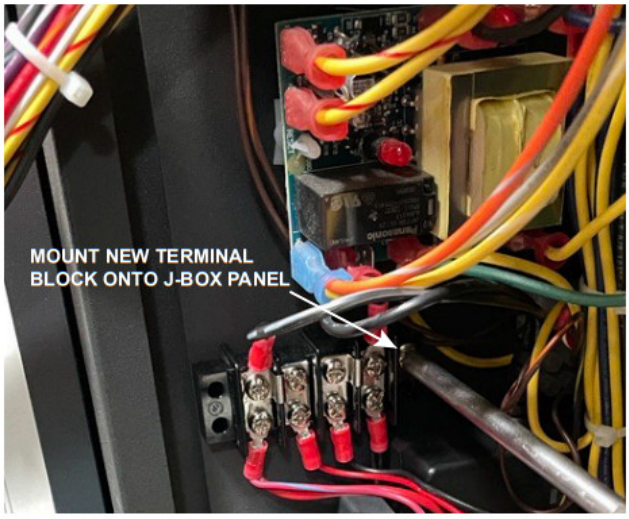

Figure 8. Mount Terminal Block

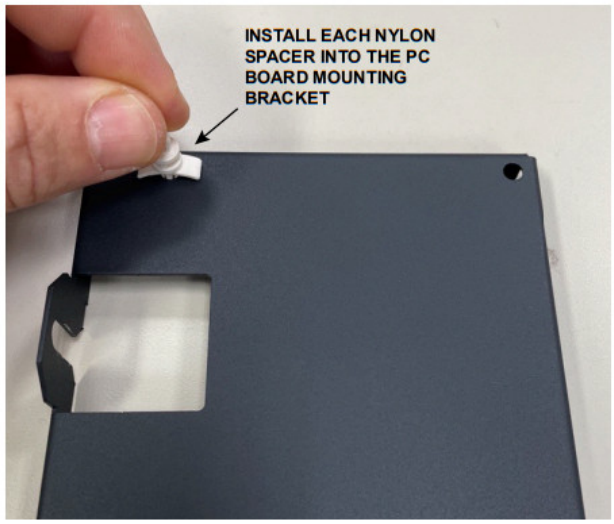

Figure 11. Install Nylon Spacers to Bracket

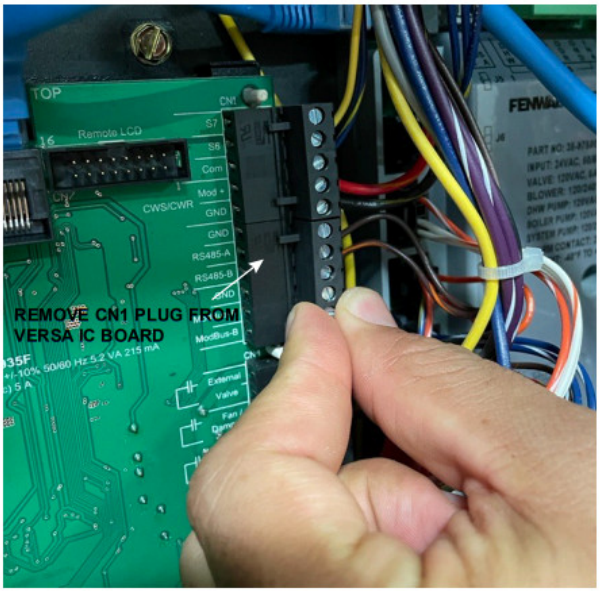

Figure 9. Remove CN1 Plug from Board

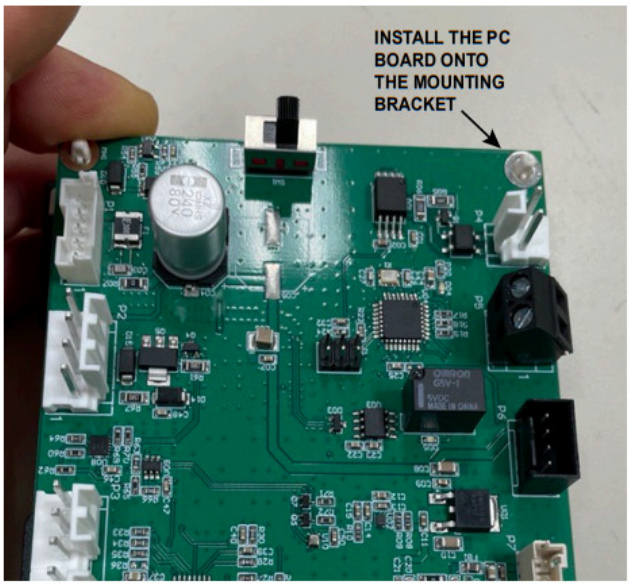

Figure 12. PC Board Installation on Bracket

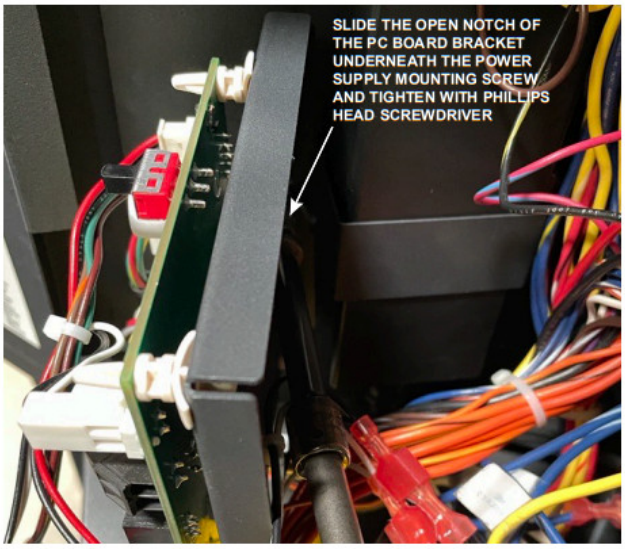

Figure 13. Install HO2T PC Board

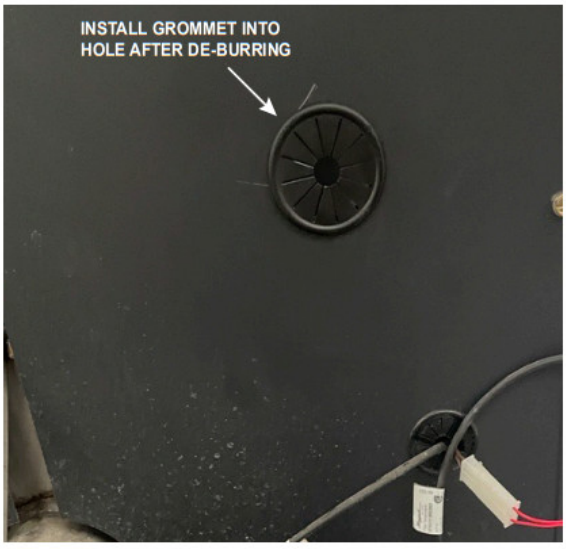

Figure 16. Install Grommet

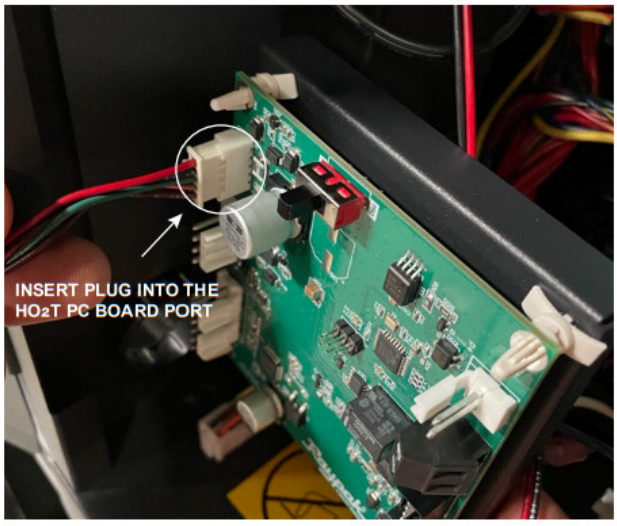

Figure 14. P1 Plug Installation

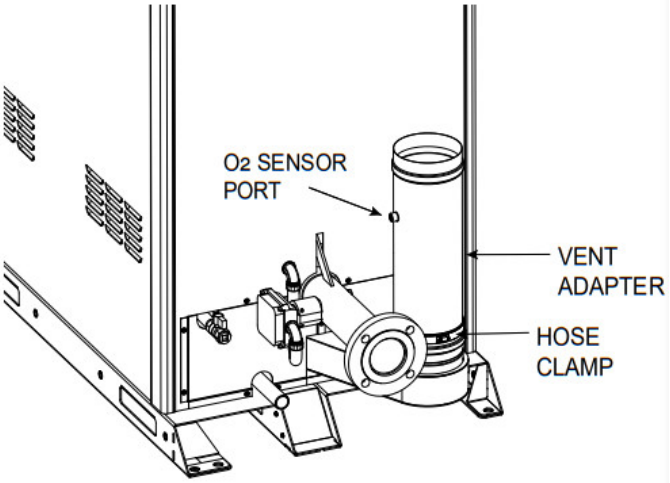

Figure 17. Installation of Vent Adapter

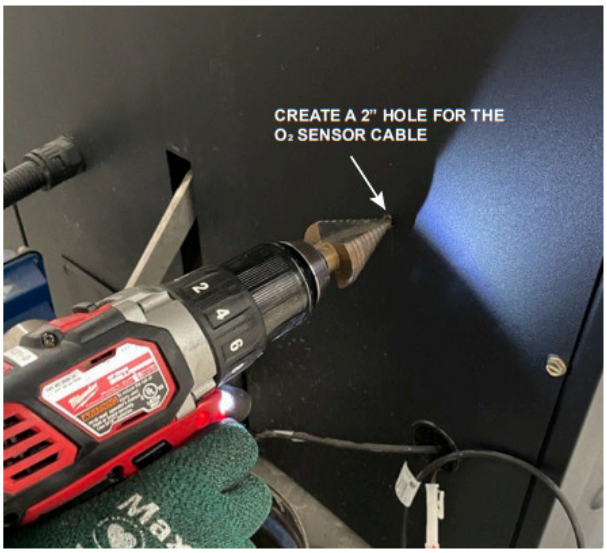

Figure 15. Create Hole for O2 Sensor Cable

Figure 18. Installation of Oxygen Sensor

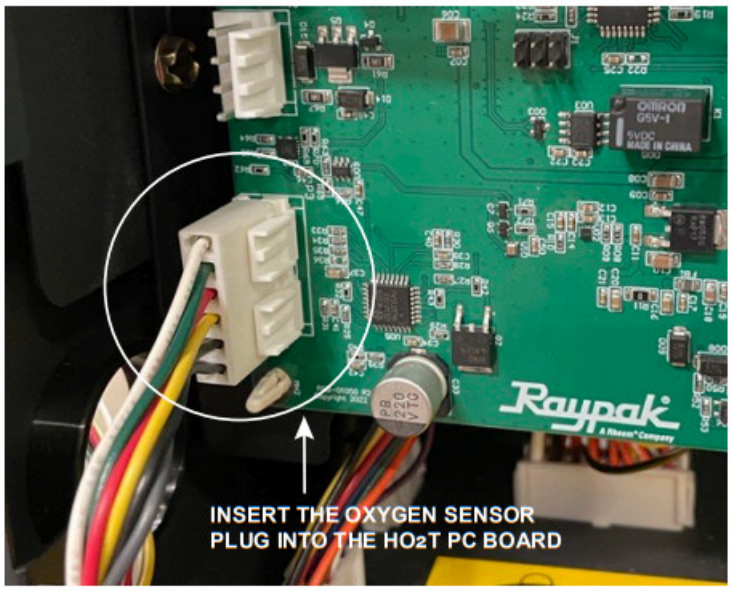

Figure 19. Oxygen Sensor Plug Installation

Figure 20. Oxygen Sensor Plug Connection

Raypak, Inc., 2151 Eastman Avenue, Oxnard, CA 93030 (805) 278-5300
P/N 100-10000507 Rev. 02
Effective: 05-30-2023
Replaces: 03-10-2023

Documents / Resources

	**Raypak 1007-4007 Ho2t Track O2 Monitoring Field Installation Kit** [pdf] Instructions 1007-4007 Ho2t Track O2 Monitoring Field Installation Kit, 1007-4007, Ho2t Track O2 Monitoring Field Installation Kit, Field Installation Kit