



RAYMOTE SERVICE INSTRUCTIONS

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 heater is disconnected to avoid damage to components, potential serious personal injury or death. Make sure the gas to the heater has been shut off.

WARNING: Make sure water, gas, and power have been turned OFF before making any repairs or servicing this equipment.

SERVICE KITS	
017198F	Swivel WiFi Antenna
017199F	WiFi Wireless Module
017200F	EMI Filter - Power Conditioner
017201F	Touchscreen Cover - Cover and Bracket
RETROFIT KITS	
017202	Small Raymote Field Install - MVB (503A - 2004A) and XTherm (1005 - 2005A)
017203	Large Raymote Field Install - MVB (2503 - 4003) and XTherm (2505 - 4005)
017204	XVers Raymote Field Install - XVers (856 - 3006)



241783

Effective: 04-01-19

Replaces: New

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1. MVB AND XTHERM INSTALLATION INSTRUCTIONS

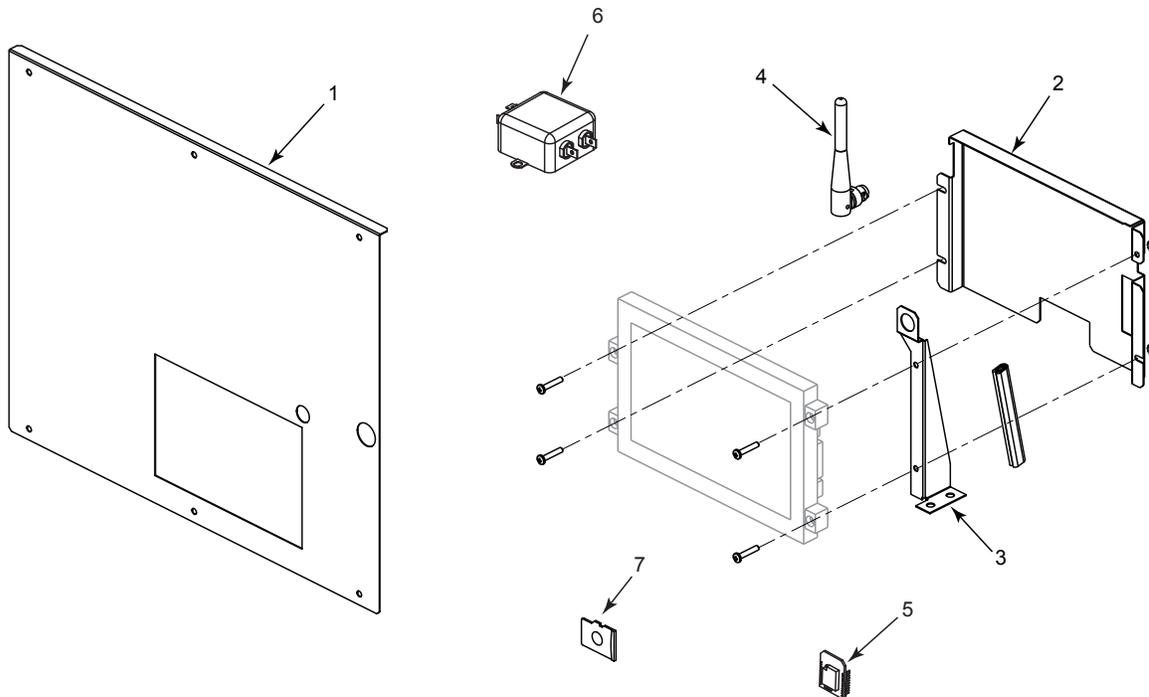


Figure 1. Raymote Components on MVB/XTherm Boiler

	Component	Description
1	J-Box Panel Cover	Junction box front cover with WiFi antenna opening
2	Touchscreen Rear Cover	Electronic controls shield
3	Antenna bracket	Supports WiFi antenna installation
4	WiFi Antenna	Enables wireless connectivity
5	WiFi Module	Enables WiFi expansion
6	Power Conditioner	Enhance power lines
7	SD Card	Software upgrade

Required tools

- Phillips screwdriver
- 5/16" Nut driver
- 3/8" Socket and wrench - used on MVB/XTherm Only
- Hex nut driver for the touchscreen bracket nuts
- Needle nose pliers
- Power drill
- Wire strippers
- Wire crimpers

Installation

The installation of the Raymote kit requires the touchscreen software to be upgraded and for a power conditioner to be installed.

Before Installation

1. Terminate any active call for heat. Disable the boiler operation in the "boiler" menu, or deactivate the enable switch on the unit.
2. Allow the unit to shut down.
3. Allow the appliance to cool down.
4. Turn OFF the boiler main power switch. Make sure the boiler is completely de-energized.
5. Locate the upper front of the boiler and follow the instructions that apply to your product.

Touchscreen Preparation

1. Remove the knurled screw that secured the front sheet metal panel. Remove front panel.

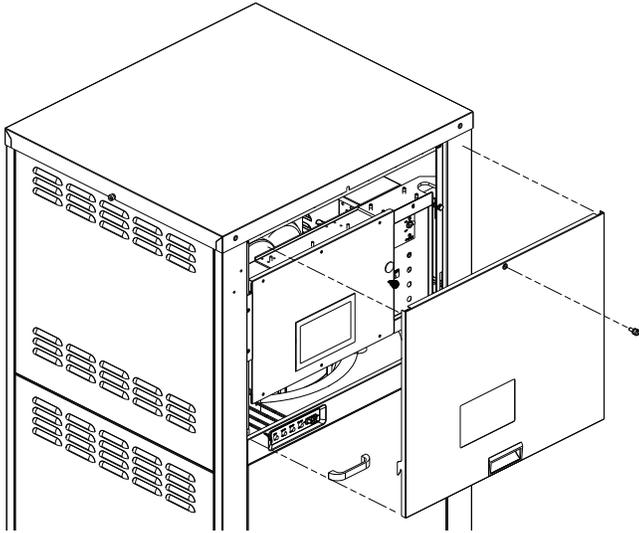


Figure 2. Remove Front Panel

2. Remove the j-box cover panel and the power switch mounting panel. Discard the j-box cover panel. It will be replaced with the new j-box cover panel which includes an additional opening to allow for the antenna placement.

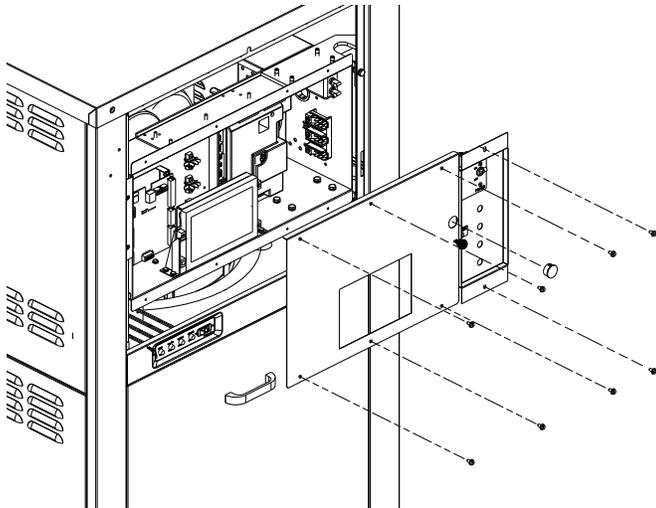


Figure 3. Remove J-Box Cover Panel and Power Switch Panel

3. Remove the power and communication harnesses attached to the back of the touchscreen.
4. Remove the four (4) 5/16" hex screws from the touchscreen mounting brackets on the Junction-box. Remove the touchscreen.

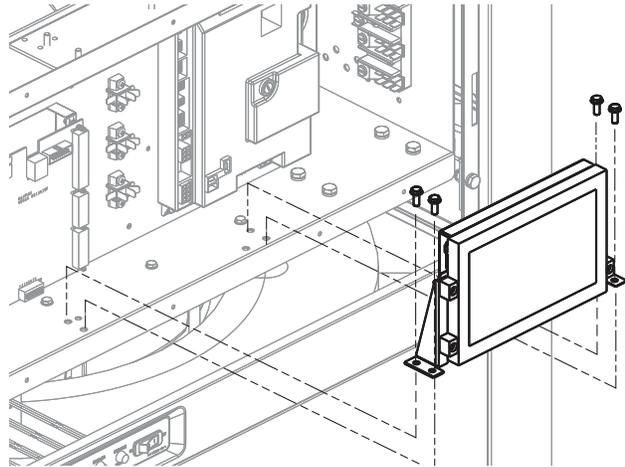


Figure 4. Remove Communication Harnesses and Touchscreen

5. Replace the right bracket with the antenna bracket (kit 01720F). Secure the antenna bracket with the grommet and install the antenna.

NOTE: Check the antenna wire when installing it on the bracket

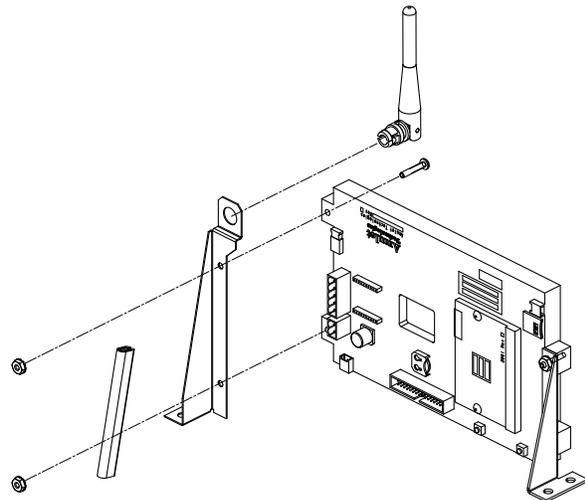


Figure 5. Antenna and Bracket Installation

Wi-Fi Module Installation

1. On the back of the touchscreen, replace the existing SD card with the new one included with the kit. For SD card replacement instructions refer to service kit 241660.
2. Insert the Wi-Fi module chip in the touchscreen socket. Make sure to place the chip in the correct position.

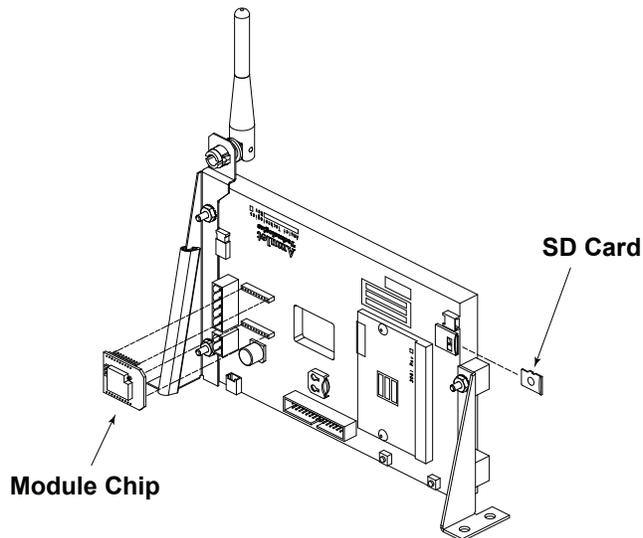


Figure 6. SD Card and Wi-Fi Module Installation

3. Connect the antenna wire to the Wi-Fi module connector.

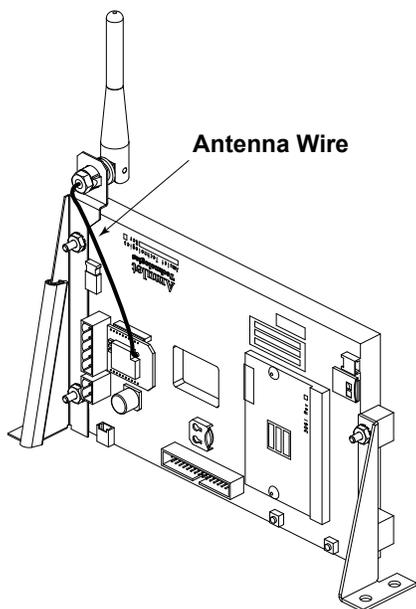


Figure 7. Antenna Wire Installation

4. Place the new touchscreen rear cover on the touchscreen and fasten with nuts. Make sure that Wi-Fi antenna wire is routed through the notch in the side of the cover.

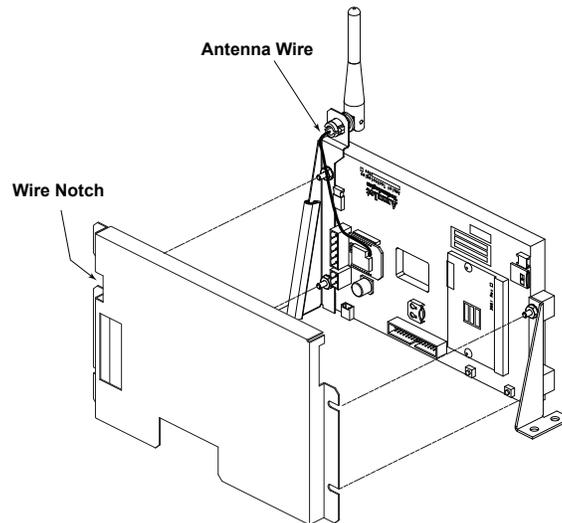


Figure 8. Touchscreen Rear Cover Installation

5. Reinstall the touchscreen in its original position and reconnect power and communication harness.

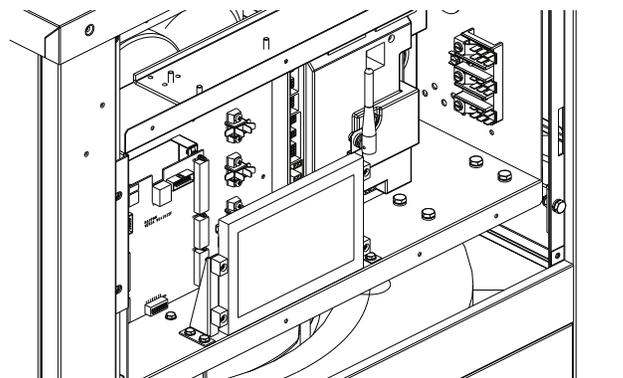


Figure 9. Touchscreen Installation

Power Conditioner Installation

1. Locate the 120VAC terminals and 24VAC transformer.
2. Use the supplied screws to fasten the power conditioner in the empty space between power terminal and transformer.

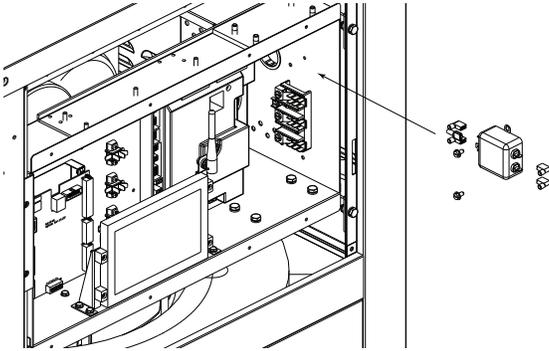


Figure 10. Power Conditioner Installation

3. Use the wire strippers, wire crimpers, wires, and QD connectors to connect the power conditioner to 120VAC and blower, as shown in the MVB/XTherm wiring diagrams on the following pages.

Front Cover Panel Re-Installation

1. Install the new front cover of the junction box and power switch mounting panel. Insert the antenna through the hole and bend the antenna upward before installing the front cover panel.
2. Secure the front cover panel with the screw. Place the Raymote decal on the front cover panel approximately on the location as shown below.

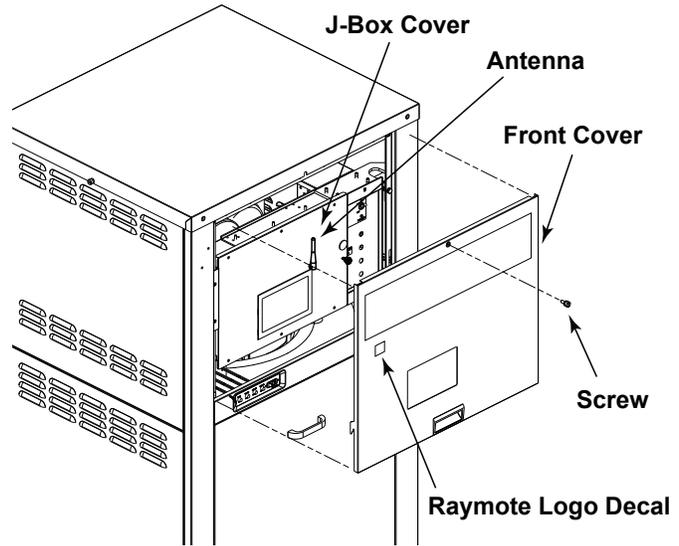


Figure 11. Front Cover Installation

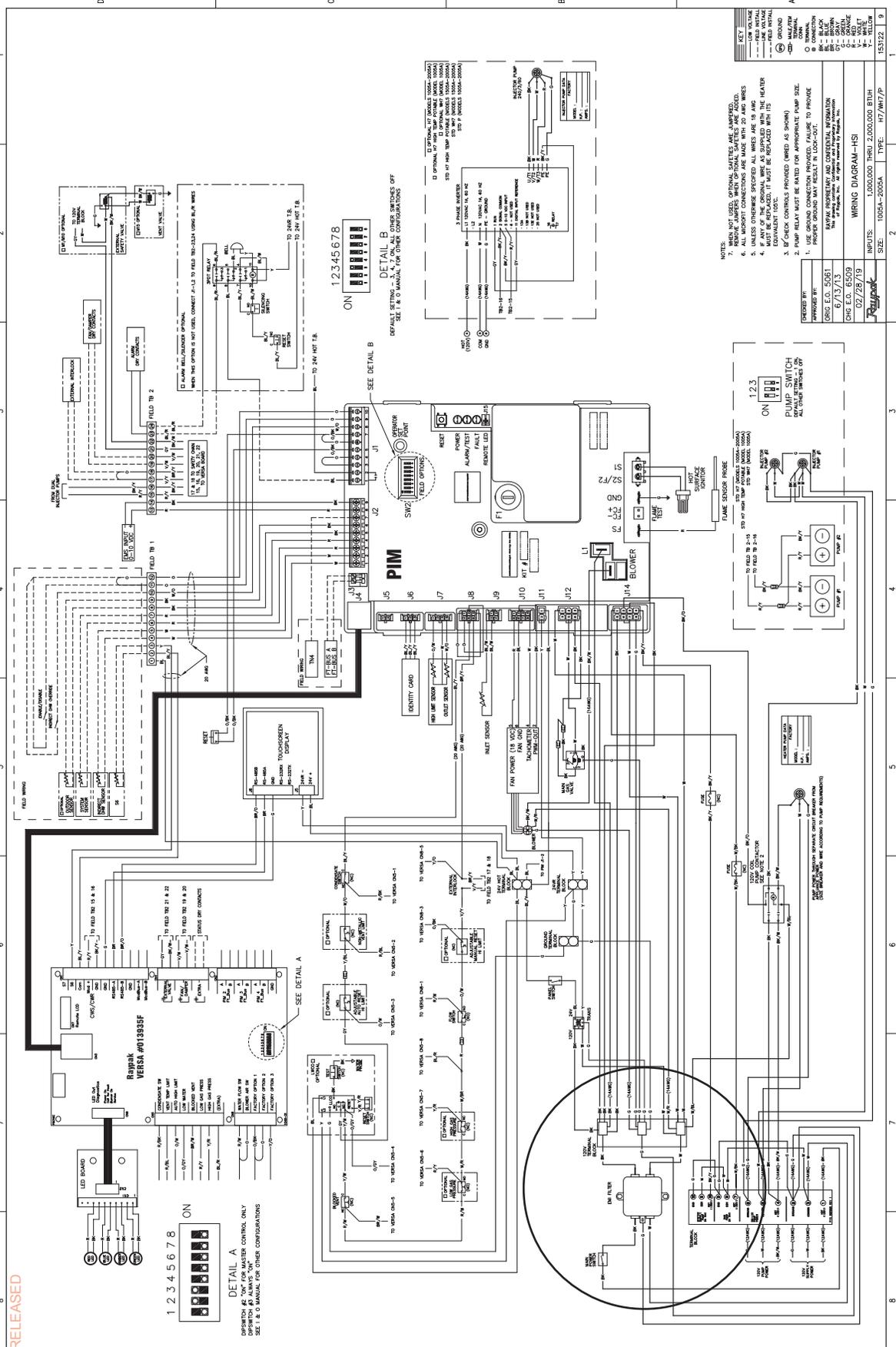


Figure 14. Wiring Diagram - XTherm 1005A - 2005A

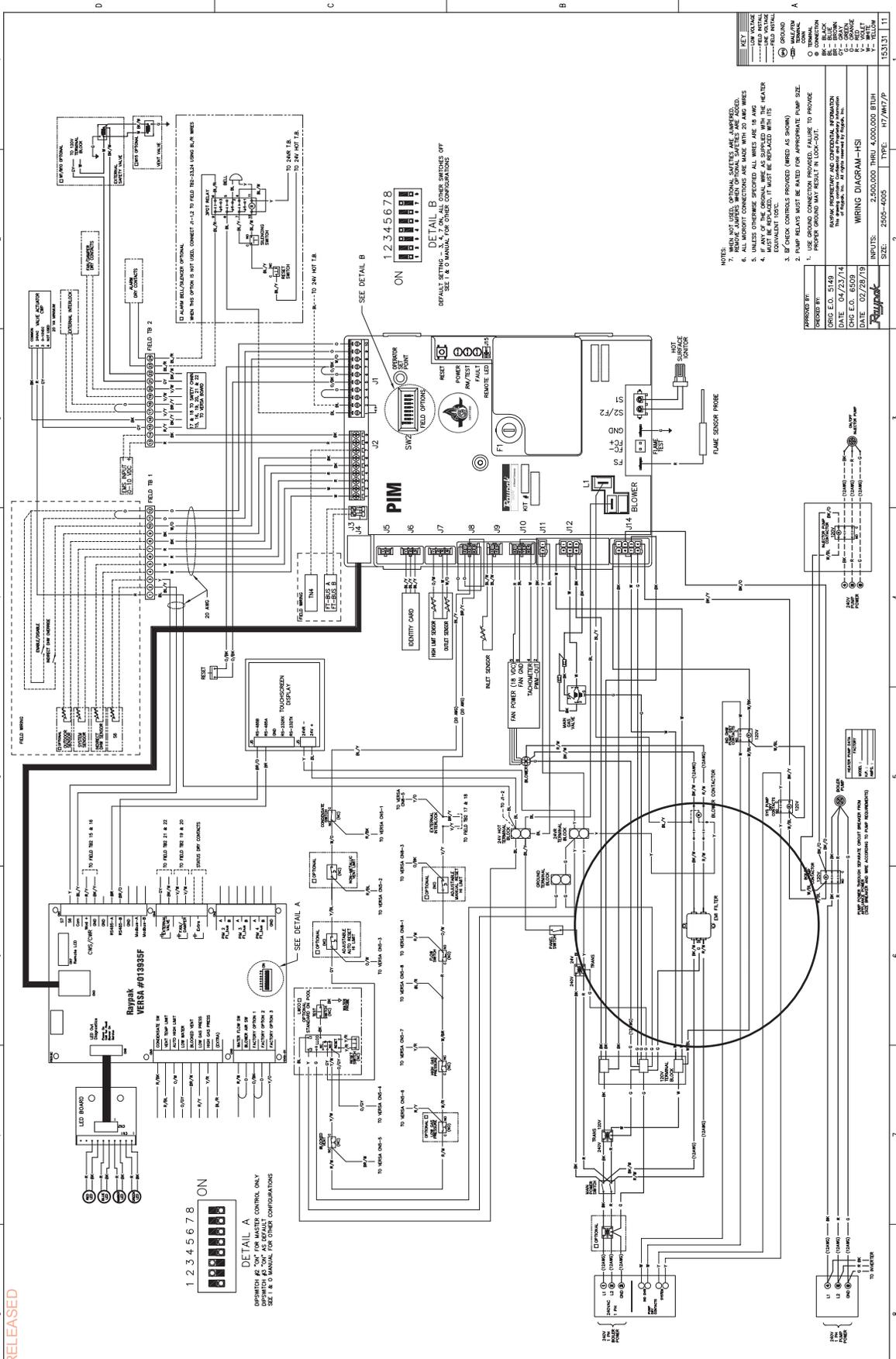


Figure 15. Wiring Diagram - XTherm 2005 - 4005

2. XVERS INSTALLATION INSTRUCTIONS

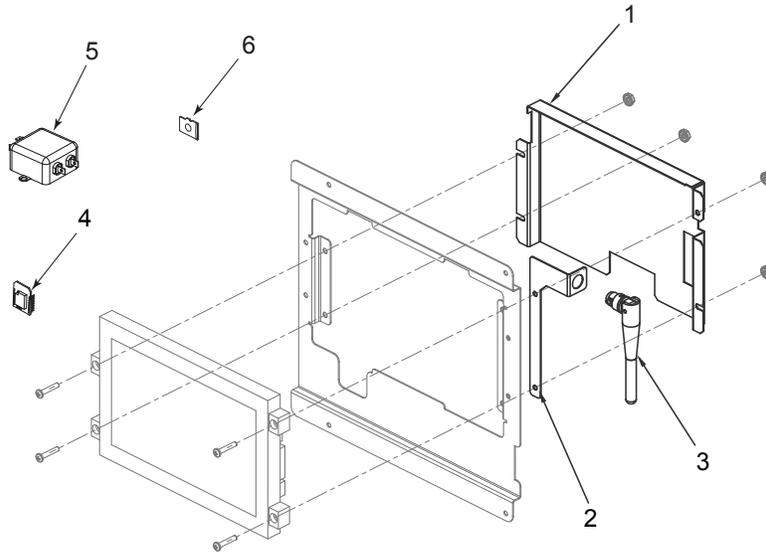


Figure 16. Raymote Components on XVers Boilers

	Component	Description
1	Touchscreen Rear Cover	Electronic controls shield
2	Antenna bracket	Supports WiFi antenna installation
3	WiFi Antenna	Enables wireless connectivity
4	WiFi Module	Enables WiFi expansion
5	Power Conditioner	Enhance power lines
6	SD Card	Software upgrade

Required tools

- Phillips screwdriver
- 5/16" Nut driver
- Hex nut driver for the touchscreen bracket nuts
- Needle nose pliers
- Power drill
- Wire strippers
- Wire crimpers

Installation

The installation of the Raymote kit requires the touchscreen software to be upgraded and for a power conditioner to be installed.

Before Installation

1. Terminate any active call for heat. Disable the boiler operation in the "boiler" menu, or deactivate the enable switch on the unit.
2. Allow the unit to shut down.
3. Allow the appliance to cool down.
4. Turn OFF the boiler main power switch. Make sure the boiler is completely de-energized.
5. Locate the upper front of the boiler and follow the instructions that apply to your product.

Touchscreen Preparation

1. Release the four snap fasteners to remove the front cover panels from the unit. Remove the panels and place them aside.

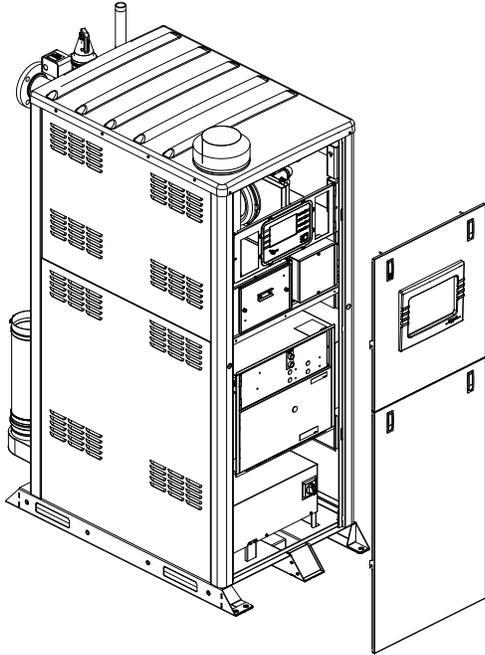


Figure 17. Front Cover Panels Removal

2. Remove the 5/16" Phillips screw that secures the swing panel.

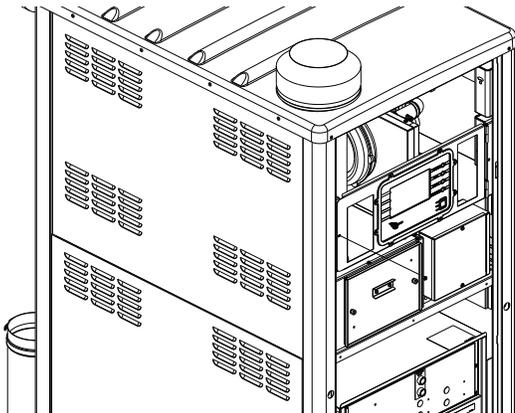


Figure 18. Swing Panel

3. Open the swing panel to the right and access the rear side of the touchscreen. Disconnect the power and communication harnesses attached to the rear of the touchscreen.
4. Remove the two hex nuts on the right side of the touchscreen. Secure the antenna bracket with the grommet and install the antenna.

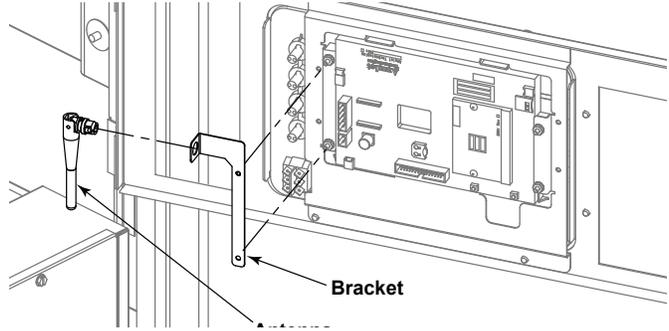


Figure 19. Antenna and Bracket Installation

Wi-Fi Module Installation

1. Remove the existing SD card in the touchscreen and replace it with the new one included in the kit. For SD card replacement instructions refer to service kit 241660.
2. Insert the WiFi module in the touchscreen socket. Ensure to insert the chip in the correct position.

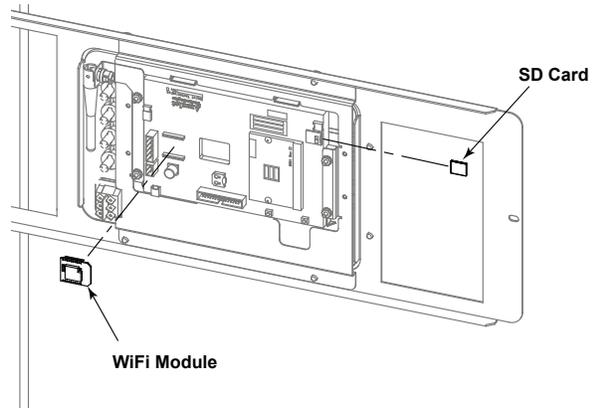


Figure 20. Wi-Fi Module Installation

3. Connect the antenna wire into the WiFi module connector.

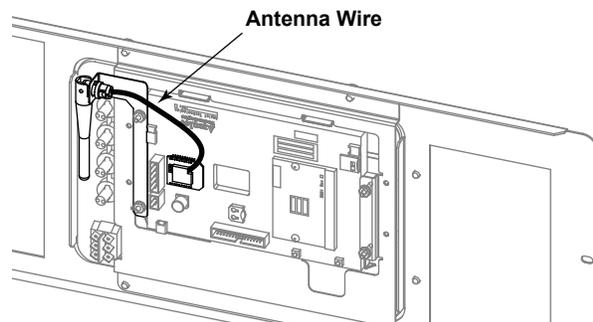


Figure 21. Antenna Wire Installation

- Secure new touchscreen rear cover with hex nuts. Route the WiFi antenna wire through the window of the cover and bend the antenna downward behind the plastic cover.

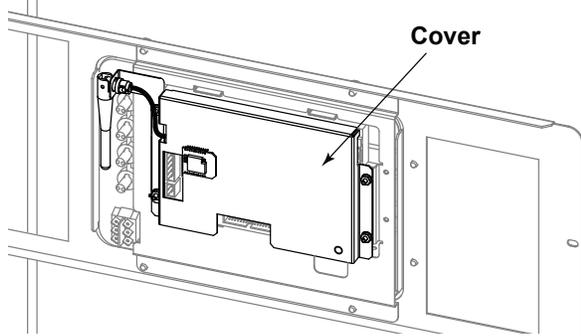


Figure 22. Touchscreen Rear Cover Installation

- Reinstall the swing frame in its original position.

Power Conditioner Installation

- Remove the front cover from the unit. Locate the transformer and power terminal base.
- Use the supplied screws to fasten the power conditioner in the empty space between power terminal and transformer.

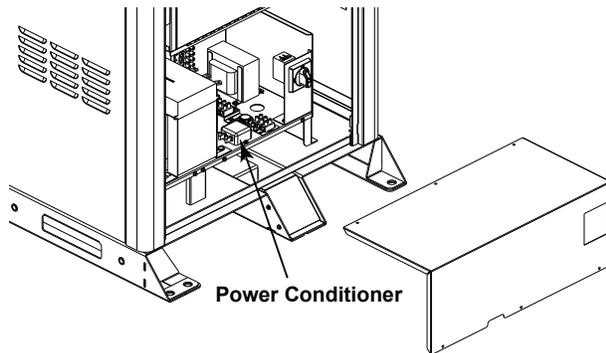


Figure 23. Power Conditioner Installation

- Use the wire strippers, wire crimpers, wires and QD connectors to connect the power conditioner to 120VAC and blower, as shown in the XVers wiring diagrams.

Front Cover Panel Re-Installation

- Reinstall the front panels. Place the Raymote decal on the front cover panel approximately on the location as shown below.

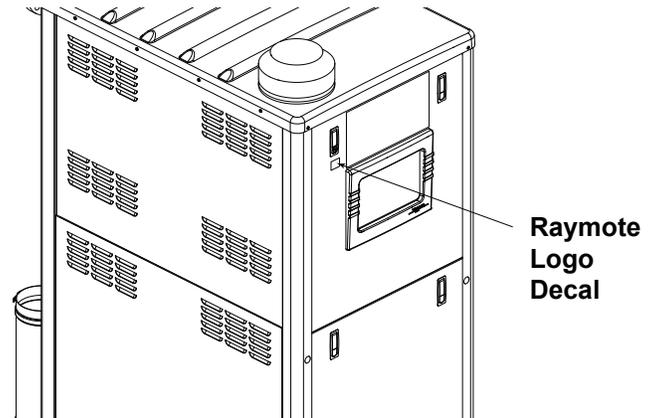


Figure 24. Front Cover Re-Installation

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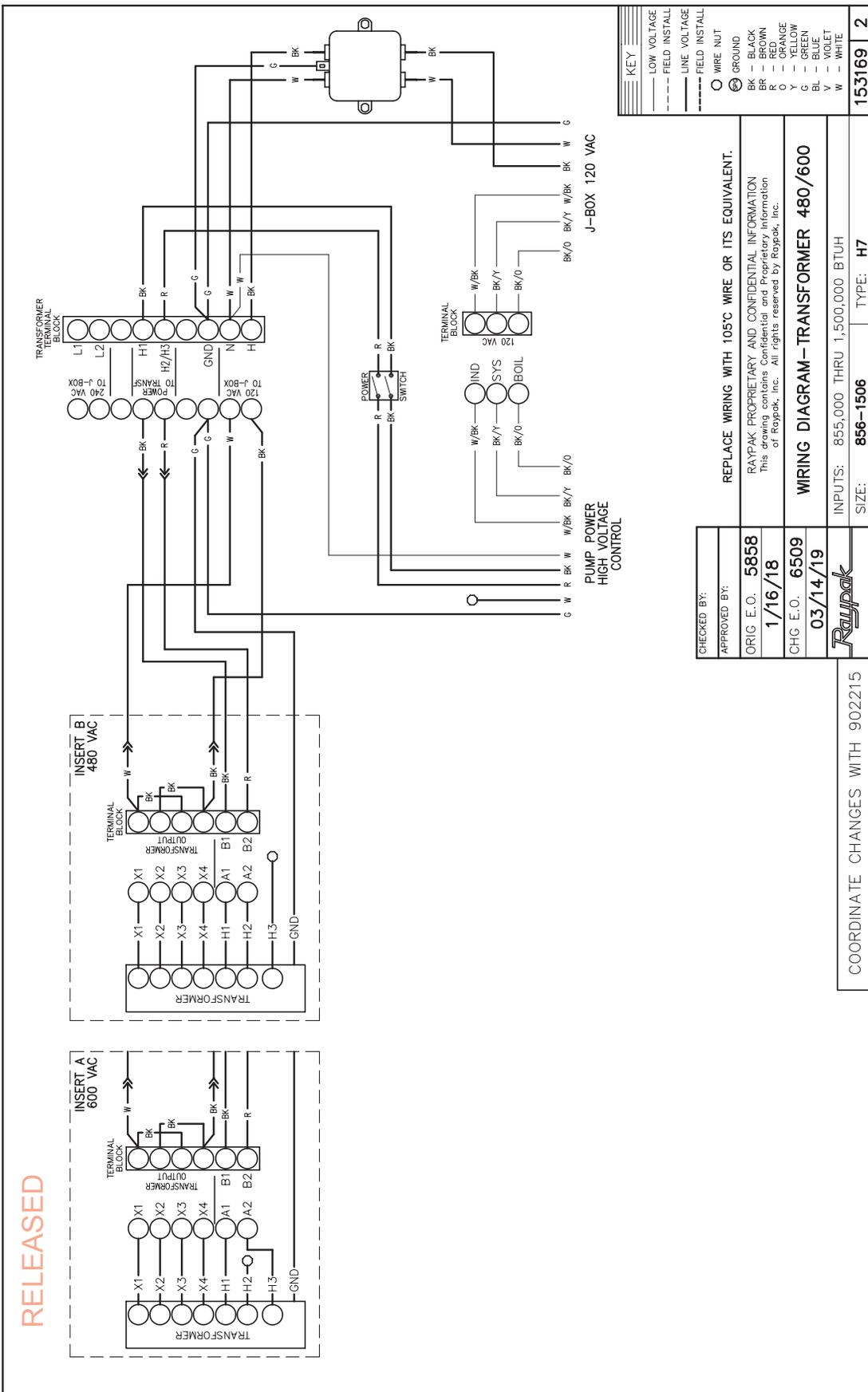


Figure 27. Wiring Diagram - XVers 480/600

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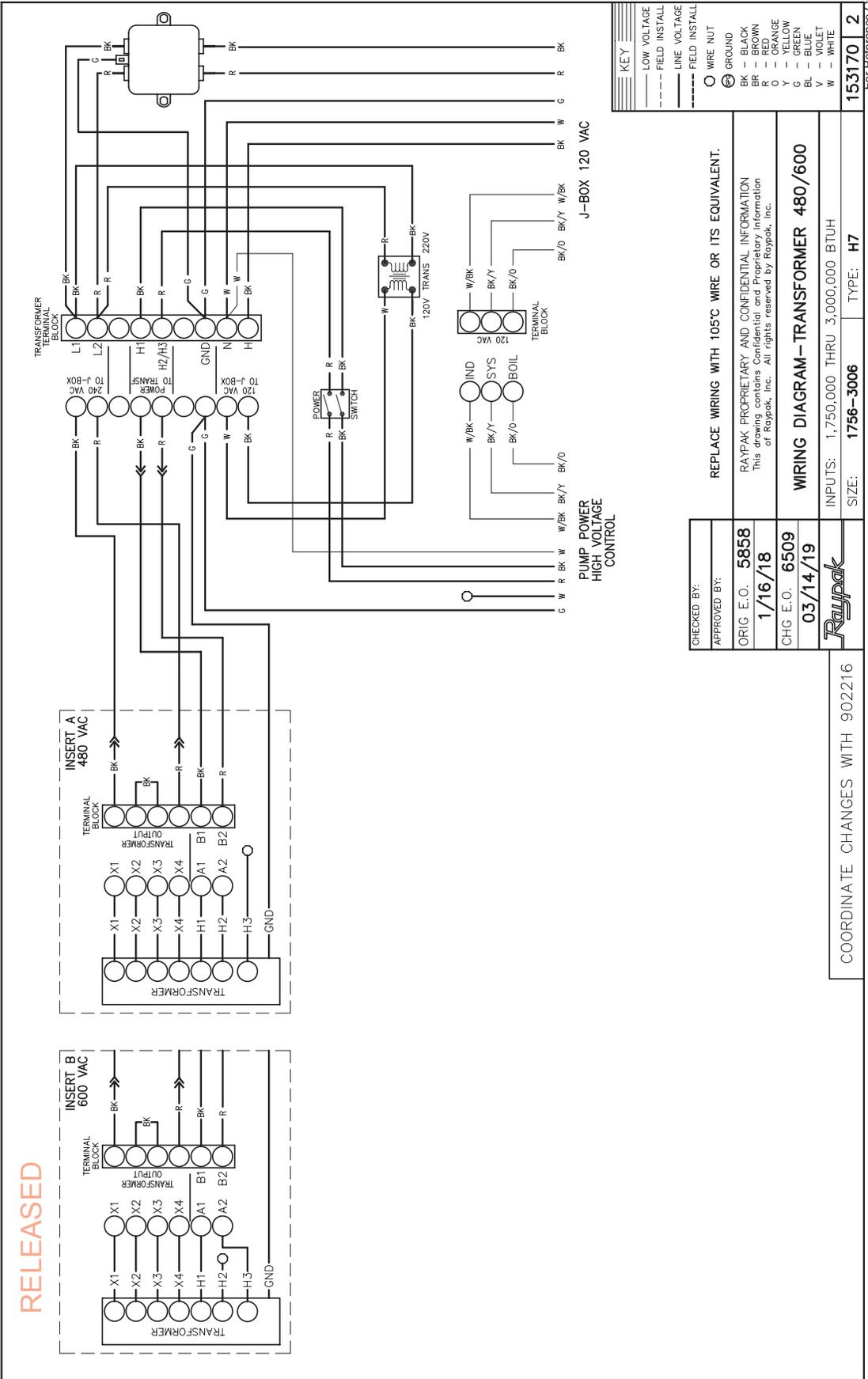


Figure 28. Wiring Diagram - XVers 480/600



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