

HMI Replacement Kit for PD44TM

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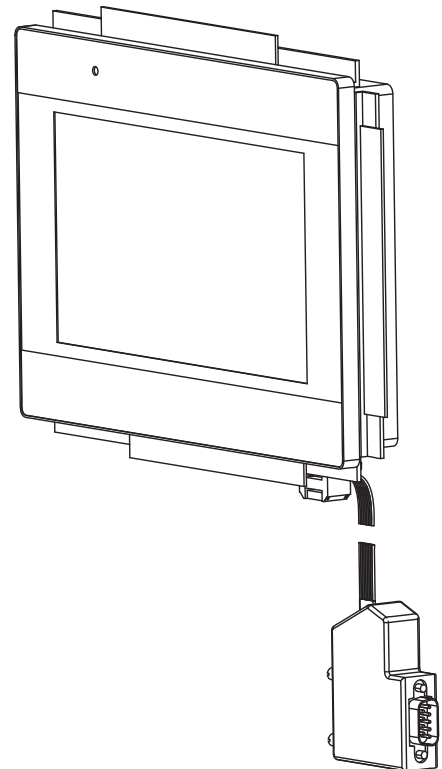
For replacing the Human Machine Interface (HMI) display on the control boxes of PD44 systems. For professional use only.

Part No. 26C194



Important Safety Instructions

Read all warnings and instructions in this manual and in all related manuals before using this equipment. Save all instructions.



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Related Manuals

Part	Description
313876	PD44 Metering Valves and Feed Systems, Operation-Maintenance
313877	PD44 Control Box, Setup-Operation
3A0987	PD44 Metering Valves and Feed Systems, Parts

Overview


These instructions are for replacing the Human Machine Interface (HMI) component of PD44 system control boxes. Replacement involves removing the existing HMI, installing spacers in the opening of the control box front panel to accommodate the new HMI, and replacing cables.






This kit 26C194 should be used to replace the HMI on both the pneumatic valve and motor-driven versions of the PD44 control boxes. Important features of this replacement kit include:

- The new HMI is slightly different in size than the previous version so spacer angles are included in the kit to allow for proper mounting of the HMI.
- A new DC power connector is included with the HMI. The wiring will need to be removed from the existing power connector and wired to the new one.
- New retaining clips are included to secure the HMI to the control box front panel.

Contact Graco Ohio Technical Assistance at 800-746-1339 or OhioTA@graco.com for additional information or assistance with this replacement kit.

Installation


WARNING

PRESSURIZED FLUID HAZARD

The equipment in this system stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure described in PD44 Metering Valves and Feed Systems Operation-Maintenance manual 313876 when you stop pumping and before cleaning, checking or servicing the equipment.

Remove and Replace the HMI

NOTE: Record all settings (purge time values, shot sizes, feed setup, etc.) from the existing system if possible.

1. Follow the Shutdown procedure in PD44 Metering Valves and Feed Systems Operation-Maintenance manual 313876.
2. Unplug the control box power cord.
3. *For motor-driven PD44 control boxes*, open the door by turning the fastener a quarter turn. See Figure 1. Then go to step 8.

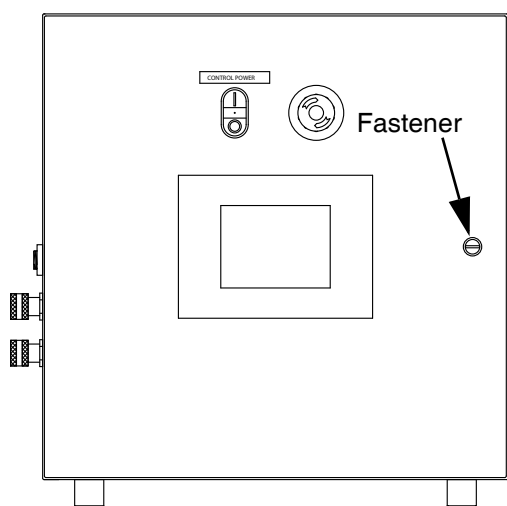


FIG. 1: Motor Driven PD44 Control Box

4. *For the pneumatic valve PD44 control box*, remove the eight button head cap screws holding the top cover of the electric box. See Figure 2.
5. Remove the cover.

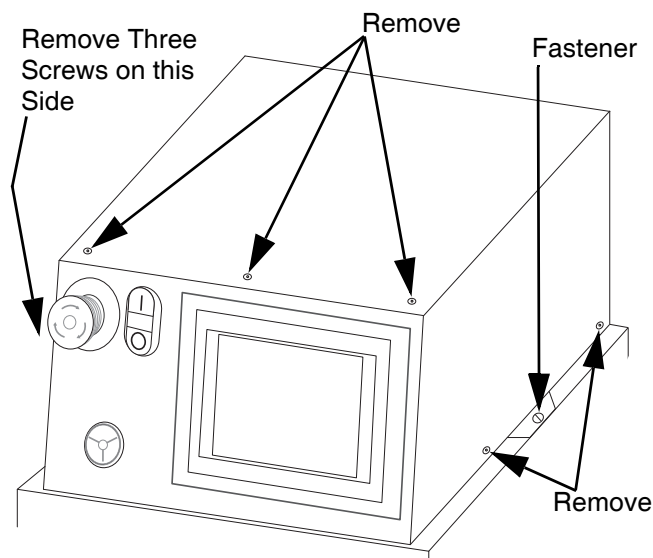


FIG. 2: Pneumatic Valve Control Box

6. Loosen the fastener a quarter turn and lift the hinged portion of the control box as shown in Figure 3.

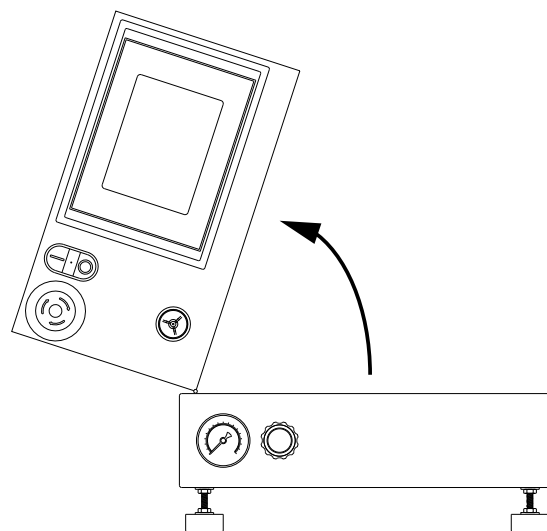


FIG. 3: Lift the Control Box

7. Disconnect the front panel from the control box by removing the five screws shown in Figure 4. This provides easier access to the HMI.

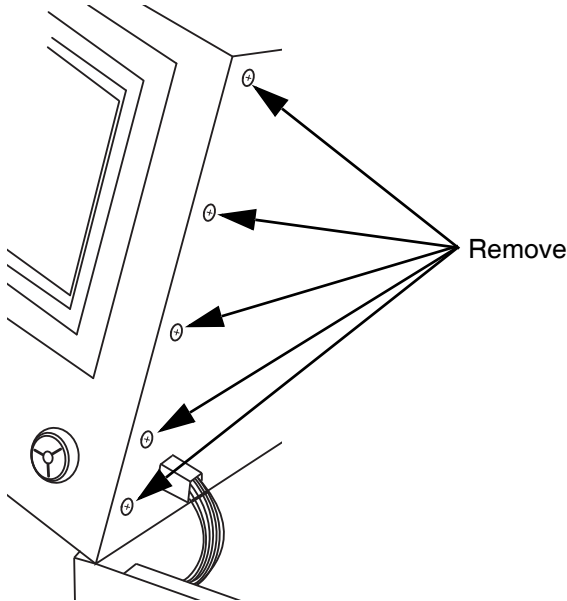


FIG. 4: Disconnect the Front Panel

NOTE: For the *pneumatic valve control box*, place the HMI and front panel on a flat surface for the next steps. For the *motor-driven control box*, you can perform the next steps with the HMI still in the front panel door.

8. Remove the following from the existing HMI:
 - The RS-485 connector with the ribbon cable that connects to the Programmable Logic Controller (PLC).
 - The DC power connection with the blue and white wires.
 - The green ground wire.

9. Loosen and remove the four HMI retaining clips and push the HMI out through the front panel of the control box.

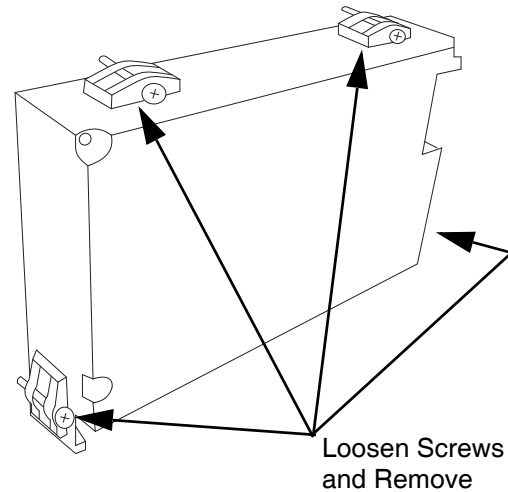


FIG. 5: Remove the Current HMI

10. Unscrew the DC wires from the DC power connector on the old HMI.

NOTICE

When reconnecting the wiring, ensure that the polarity is correct to prevent damage to the equipment.

11. Remove the DC power connector from the new HMI and connect the wires to it. Connect the blue wire #8, +24 VDC, on the right and the white wire (with blue stripes) #6, DC common, in the middle as shown in Figure 6.

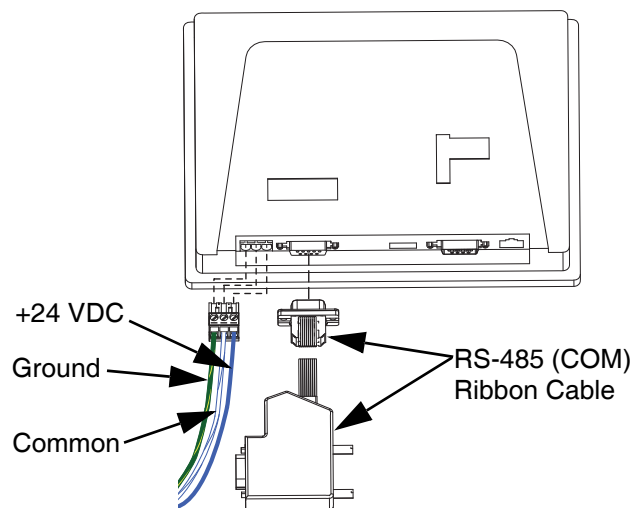


FIG. 6: Connect the Cables to the HMI

12. Add the green ground wire that you disconnected from the old HMI to the new connector on the left.
13. Connect the RS-485 (COM) ribbon cable included in the kit and the newly connected power cable to the replacement HMI as shown in Figure 6.
14. Using the double sided tape, fasten the spacer angles to the inside of the panel. See Figure 7.
15. Feed the power cable and ribbon cable through the opening in the front panel.
16. Place the HMI into the panel and fasten it with the four retaining clips that are included in the kit. Tighten the screws in the retaining clips until the HMI is secure.

NOTE: Two spacer angles fit in the left and right side of the opening and two fit in the top and bottom. The small ridges should be placed over the edges of the opening and the tape should be placed along the longer, flat part of the spacer angles. Press the spacer angles tightly against the inside of the front panel to secure them.

NOTE: You may need to back the screws in the retaining clips almost all the way out to attach the clips before tightening them.

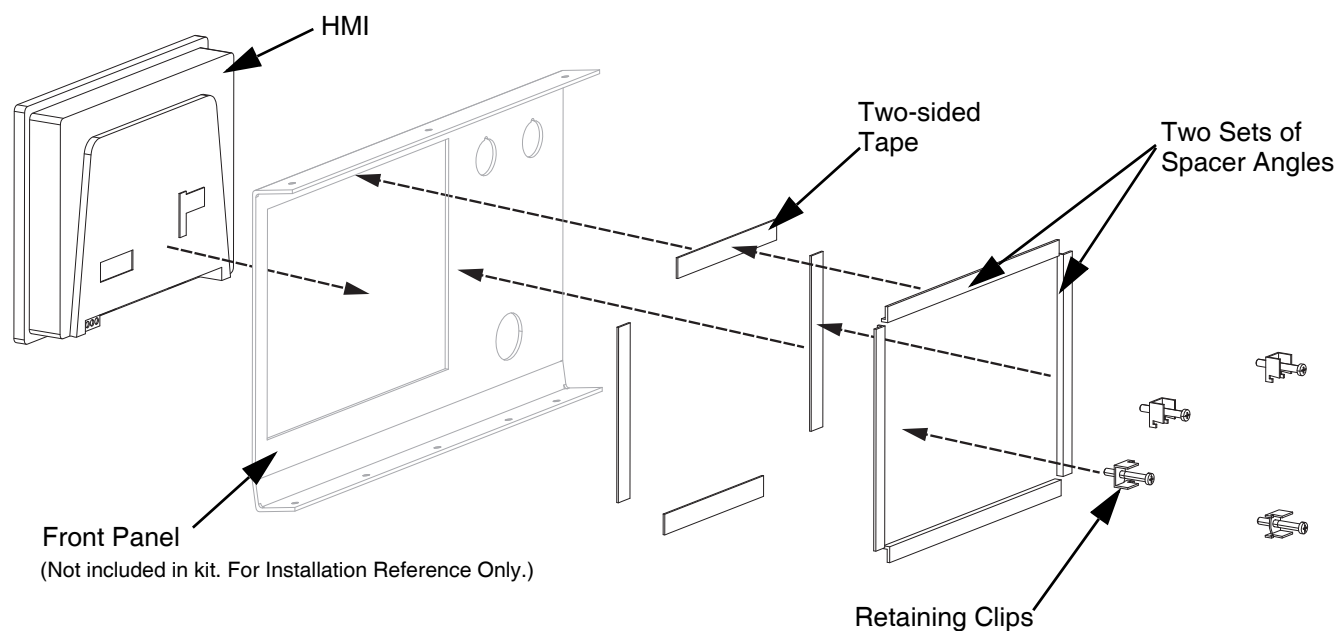


FIG. 7: Attach the HMI to the Front Panel

17. Remove the existing ribbon cable from the PLC and replace it with the new ribbon cable. *On the pneumatic valve PD44 control box*, there is only one RS-485 port located below the battery as shown in Figure 8.

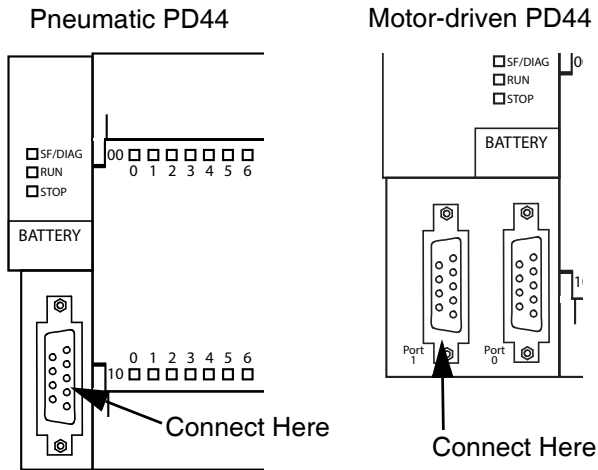


FIG. 8: Ribbon Cable Connection at the PLC

NOTE: There are two ports *on the motor-driven PD44 control box*. Make sure you insert the connector for the new ribbon cable in the port marked Port 1 on the left.

18. *For the pneumatic valve control box*, reattach the front panel to the control box using the five screws that were removed in step 7.
19. Replace the hinged part of the control box back onto the base and turn the fastener a quarter turn.

Load the PLC Software

The HMI Replacement Kit includes an EEPROM to load a revised program into the PLC to make it compatible with the new HMI.

1. With the power still off, remove the battery from the PLC. See Figure 8 for the location of the battery.
2. Place the new EEPROM in the battery slot.
3. Plug in the power cord and turn on the power to the control box. The program loads 1-2 seconds after power up.
4. Remove the EEPROM and reinsert the battery.

NOTE: The EEPROM can be used to reprogram other PLCs if they have the new HMI.

5. Re-enter the settings that you recorded before you started the steps to install the new HMI.
6. For the pneumatic PD44 with an LRT, you need to recalibrate the cylinder. Refer to PD44 Control Box Setup-Operation manual 313877 for calibration information.
7. *For the pneumatic PD44 control box*, reattach the cover using the eight button head cap screws that were removed in step 4.
8. *For the motor-driven PD44 control box*, close the door and turn the fastener a quarter turn.

Parts

Kit 26C194

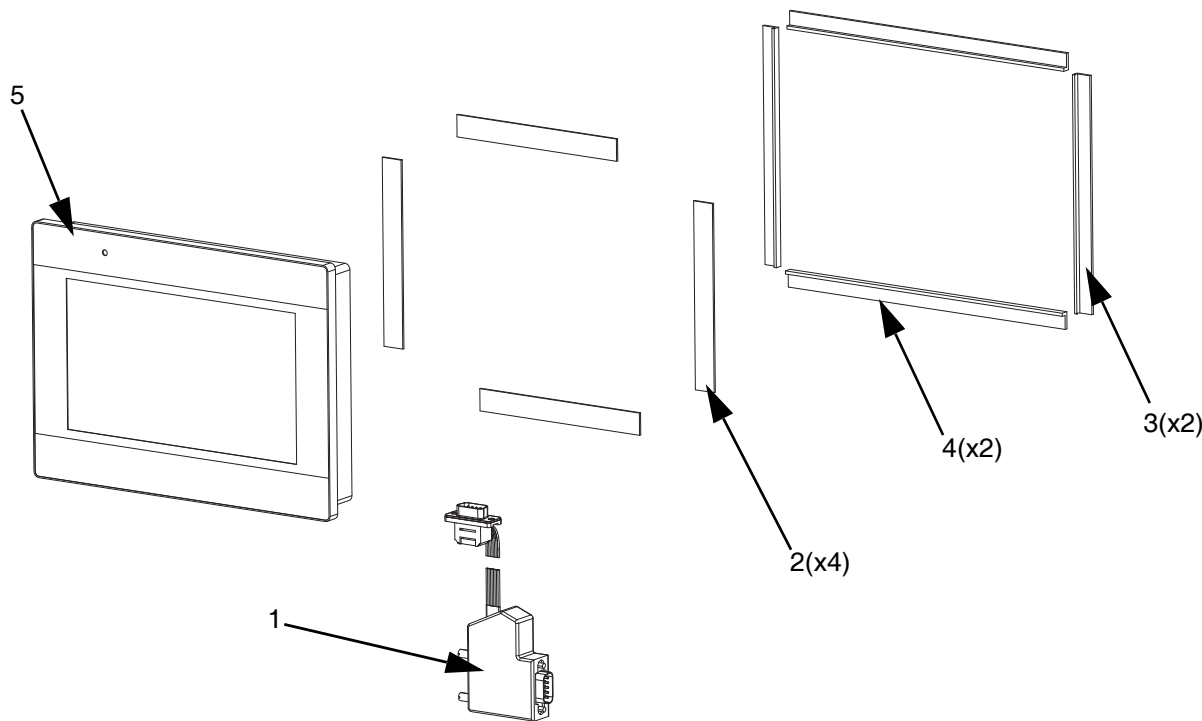


FIG. 9: HMI Replacement Kit Parts

Ref	Part	Description	Quantity
1	---	CABLE, adapter, hmi replacement	1
2	---	TAPE, foam, 1/2 wide	4
3	---	SPACER, hmi, 5 inch	2
4	---	SPACER, hmi, 7 inch	2
5	17J400	DISPLAY, hmi, color, 7 in., 5070 l, w/ prog	1
6	81/1096-E1/22*	CONTROL, eeprom, s7-23xx, w/prgrm, en	1

--- Not available for individual sale.

* Not shown.

Graco Information

Sealant and Adhesive Dispensing Equipment

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor, go to www.graco.com and select “Where to Buy” in the top blue bar, or call to find the nearest distributor.

If calling from the US: 800-746-1334

If calling from outside the US: 0-1-330-966-3000

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
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Original instructions. This manual contains English. MM 3A5656

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