Fischer Industries Inc.®

Engineering Bulletin F3-3017

Installing the KB92B12A Temperature Control Board

Models: Classic E, 3000SV

Rev. 3

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Serial Numbers: All

Overview

The KB92B12 developer temperature control board is no longer manufactured because the CA3059/79 chip is no longer available. As a result, a new board, the KB92B12A was designed to take its place. The KB92B12A controls developer temperature just like the KB92B12. The only difference is that the KB92B12A has a 5-position terminal block. The KB92B12A therefore has different wiring connections.

Installation Procedure

Before beginning work, refer below to the wiring diagrams shown in Figure 1 (for the Classic E) or Figure 2 (for the 3000SV). You will be working with the following components:

1. KB92B12A   - The "new" temperature control board
2. KB92B12   - The "old" temperature control board
3. ME85S2   - The level sensor board
4. KB87A1A   - The temperature sensor probe
5. ME85S1   - The developer heating element probe
6. KL85E1   - The developer ready lamp
7. TB2   - Terminal block TB2

To remove the old "B12" board and install the new "B12A" board, do the following:

1. Turn the main power switch on the film processor to the OFF position.

2. Unplug the film processor.

3. Remove the plastic lid and cover from the top of the film processor.

4. Remove the aluminum electrical cover (four screws). The serial number sticker is located on this cover.

5. With the electrical cover removed from the film processor, locate the developer temperature control board KB92B12, the level sensing board ME85S2 and terminal block TB2. The KB92B12 board has a large potentiometer on it and the ME85S2 has a clear plastic relay on it.

6. Locate the temperature sensor probe (mounted vertically from the back corner of the developer tank) and the heater element probe (mounted horizontally through the side of the developer tank). **It is important that you know the difference between these components**.

7. Remove the temperature sensor probe wire from T1 on the old B12 board. Re-connect that wire to T4 on the new B12A board.

8. There are two wires located on the bottom terminal of T5 on TB2:
    - Remove the temperature sensor probe wire from T5 on TB2 and re-connect it to T5 on the new B12A board.
    -Remove the Developer Ready Light wire from T5 on TB2 and re-connect it to T2 on TB2.

9. There are two wires located on T4 of the old B12 board:
    - Find the inter-connecting wire that runs from T6 on TB2 (this should be the thicker wire), disconnect it from T4 of the old B12 board and re-connect it to T3 on the new B12A board.
    - Remove the developer heater wire (this should be the thinner wire) from T4 of the old B12 board and connect it to T2 of the new B12A board.

10. Remove the white neutral wire from T2 of the old B12 board and re-connect it to T2 on the new B12A board.

11. There are two black wires on T3 of the old B12 board:
    - Find the inter-connecting wire that runs from T5 of the Level Sensing Board. Disconnect it from T3 of the old B12 board and re-connect it to T3 of the new B12A board.
    - The other wire should run from T2 of TB2. Disconnect it from T3 of the old B12 board and re-connect it to T1 of the new B12A board
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12. Slide the old B12 board (which should now have no wires on it) out of the snap track .

13. Carefully slide in the new KB92B12A board into the snap track. Take care not to disturb any of the components on the board.

14. **<u>IMPORTANT!</u>** Check all of the wiring changes made in the steps above against the wiring diagrams shown in Figures 1 or 2 below. Wiring mistakes could damage the new KB92B12A temperature control board when you power up the film processor.
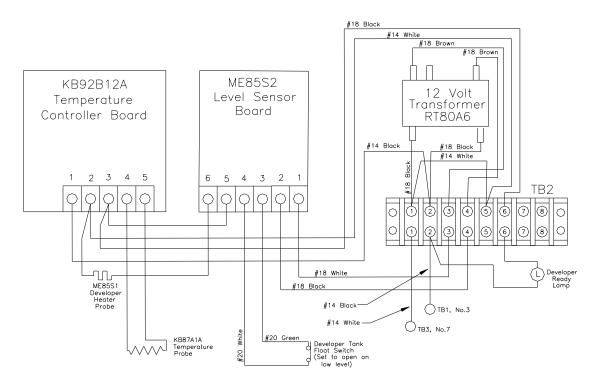
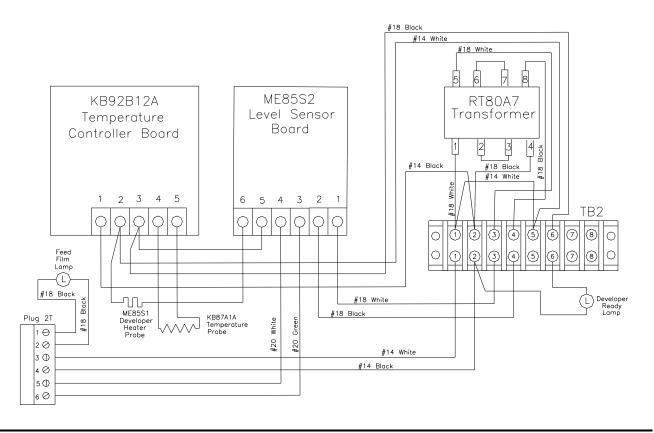Figure 1 - Classic E Developer Temperature Control Wiring

Figure 2 - 3000SV Developer Temperature Control Wiring

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Setting Developer Temperature

Once you are sure that the wiring changes you made conform to the diagrams shown in Figure 1 or Figure 2 below, it's time to power up the film processor and adjust the developer temperature on the new control board. Do the following:

1. Plug in the film processor, and depending on the film processor model, turn the main power switch to the ON, RUN, or STANDBY position.
2. Check to make sure that LED D1 (See Figure 3 below) on the new KB92B12A board is lit and the "DEVELOPER READY" lamp on the front of the film processor is off. This means that the new temperature control board is calling for heat.
3. After about 10 minutes, check the developer solution temperature with a thermometer. Using a small screwdriver, adjust the potentiometer R9 on the new KB92B12A board until the developer solution temperature reaches the correct setpoint of 94°F. When the developer solution reaches setpoint, LED D1 on the new board should go off, LED D2 on the new board should be on, and the DEVELOPER READY light on the front of the film processor should come on. It is normal for both LED D1 and LED D2 to be on just before the temperature reaches the set point.
4. When the temperature is set properly, shut the film processor off, unplug it, and reinstall the aluminum electric cover on the top of the film processor.
5. Plug the film processor back in. It is now ready for use.

<u>Figure 3 - KB92B12A Temperature Control Board Components</u>