

CanWorks[®] Chipset Installation



WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.



WARNING: Risk of electrical shock. Failure to observe may result in personal injury, death, or equipment damage.

1. Description

The three integrated circuit chips must be replaced for software upgrades to the SM-1 or SM-2 spray monitor and the UI-1 display monitor. The chips provide the latest features and/or improve performance to the unit.

2. Before Installing the Chipset

NOTE: The ground strap and removal tool are required for chipset installation and are included in the replacement kit. If you need to order additional parts, refer to *Parts*.

Follow these steps before you install the CanWorks system chipset.



WARNING: Disconnect equipment from the line voltage.

1. Make sure that power is turned off to the CanWorks system.
2. Remove the wrist strap from the replacement kit.
3. Place the wrist strap loop around your wrist and pull snug.
4. Locate a flat, clean, work area with a clean bare grounding surface such as a grounded metal surface.
5. Attach the pressure sensitive adhesive strip of the wrist strap to the clean bare grounding surface.
6. Remove the chip removal tool and instruction sheet from the replacement kit. Read and follow the instruction sheet for using the tool to remove the chips.

3. Spray Monitor

Upgrade the two software chips in the SM-1 or SM-2 spray monitor.

Remove the Circuit Board

Follow these steps to remove the CanWorks system spray monitor circuit board.

NOTE: Leave the end caps hanging so that the cable connections do not have to be removed.

1. See Figure 1.
Loosen the two screws (2) on each end cap (1).
2. Remove the spray monitor from the DIN rail.
3. Remove the screw (4) that secures the circuit board (3).
4. Remove the circuit board and place it on the work area.

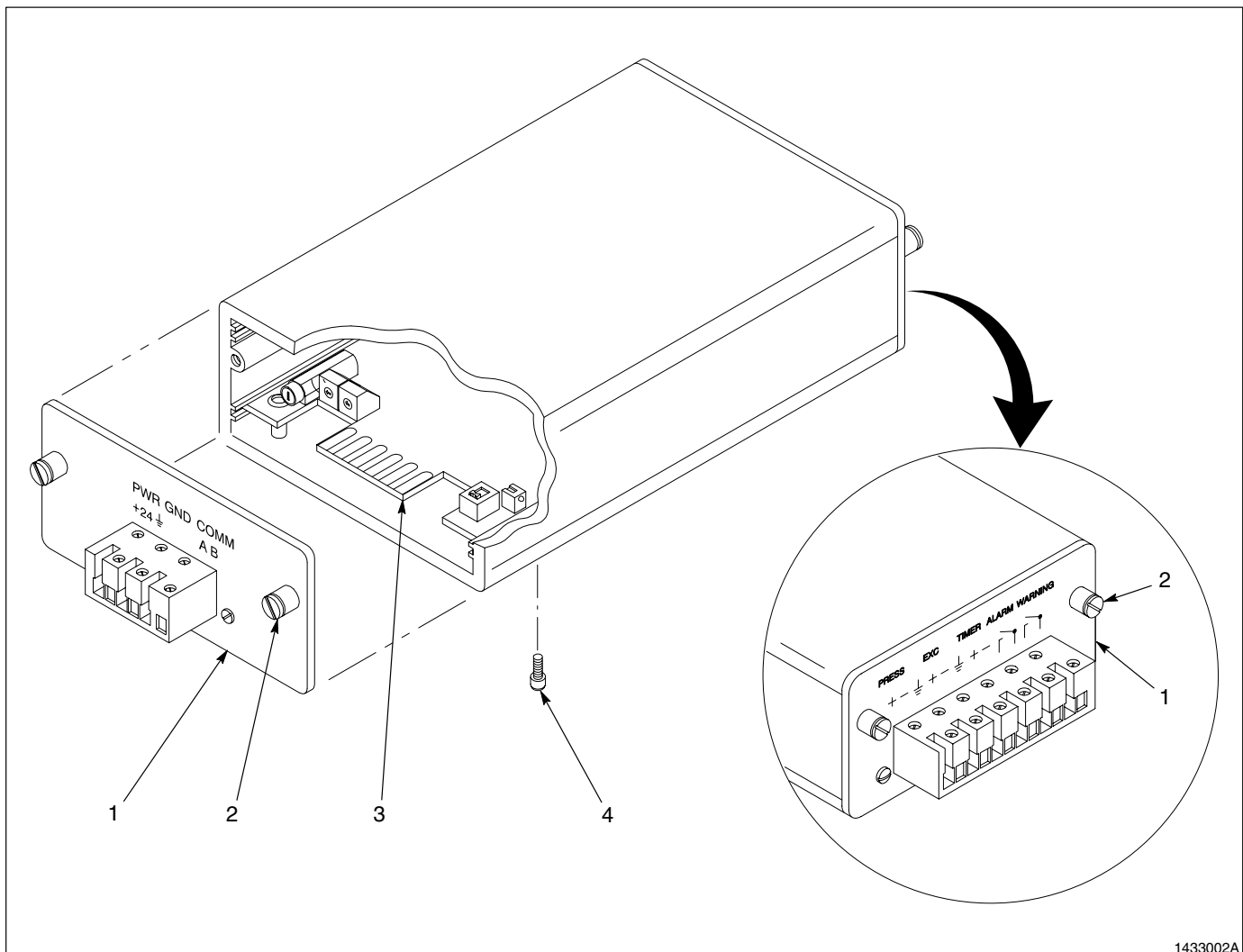


Fig. 1 Spray Monitor

1. End cap assembly
2. Screws

3. Circuit board

4. Screw

Replace the Chipset

Follow these steps to replace the chips located on the SM-1 or SM-2 spray monitor circuit board.

NOTE: Be sure that you are wearing the wrist strap. For more information, refer to *Before Installing the Chipset*.

1. Remove the new chips from the anti-static bag in the replacement kit.

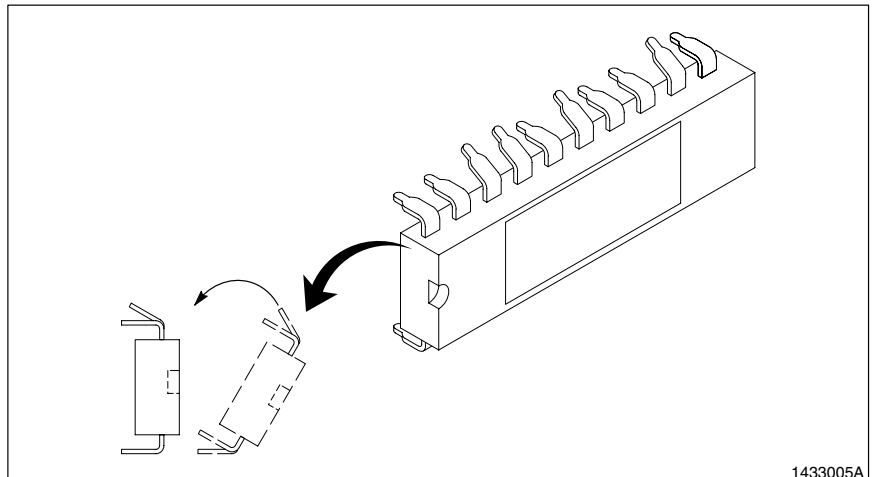
Refer to Table 1 for chip labels.

Table 1 Spray Monitor Chip Labels

Circuit Board	Chip U11 Label	Chip U2 Label
SM-1	SM-1 U11	SM-1 U2
SM-2	SM-2 U11	SM-2 U2

2. See Figure 2.

Check each chip for bent or broken pins. To improve alignment to the pin socket, gently push each side of the chip against a hard surface until the pins are perpendicular.



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Fig. 2 Straighten the Chip Pins

Replace the Chipset *(contd)*

3. See Figure 3.

Install a chip:

- a. Line up the notch (1) on a chip (2 or 3) with the white outline notch on the circuit board. The notch should be on the left.
- b. Grasp the chip at the center edges and press it into place.

4. Install the remaining chip in the same manner.

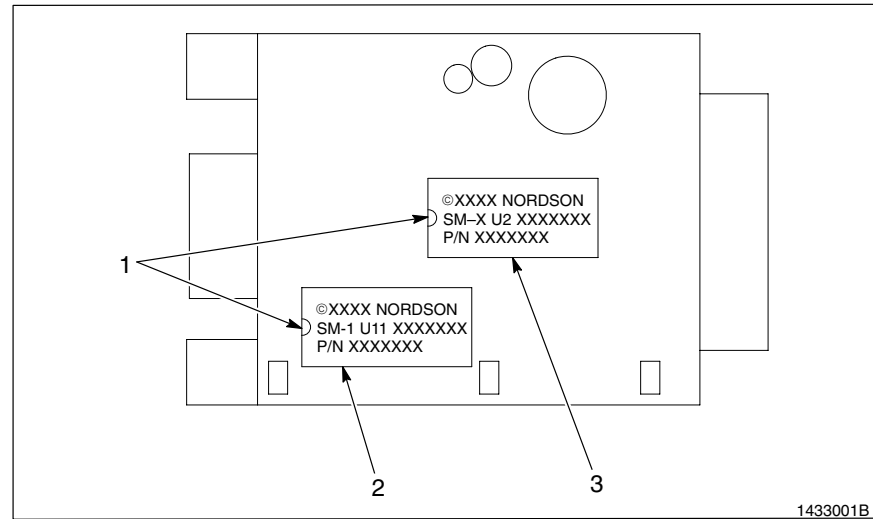


Fig. 3 Spray Monitor Circuit Board with Chip Locations

- | | |
|-------------------|---|
| 1. Notch | 3. PIC micro controller chip U2 for SM-1 or SM-2 spray monitors |
| 2. EPROM chip U11 | |

Replace the Circuit Board

Follow these steps to replace the CanWorks system spray monitor circuit board.

1. See Figure 1.

Insert the circuit board (3) into the enclosure.

2. Install the screw (4) and tighten securely.
3. Install the spray monitor to the DIN rail.
4. Install the two end caps (1) and tighten the screws (2).

4. Display Module

Upgrade the the single software chip in the UI-1 display module.

Remove the Display Cover

Follow these steps to gain access to the circuit board.

1. See Figure 4.

Remove the six screws (1) that secure the front panel (2).

2. Lift the panel while keeping the ribbon cables and wires attached. Lay the panel to the side.
3. Do not remove the circuit board (3). The chip is accessible from the inside of the enclosure.

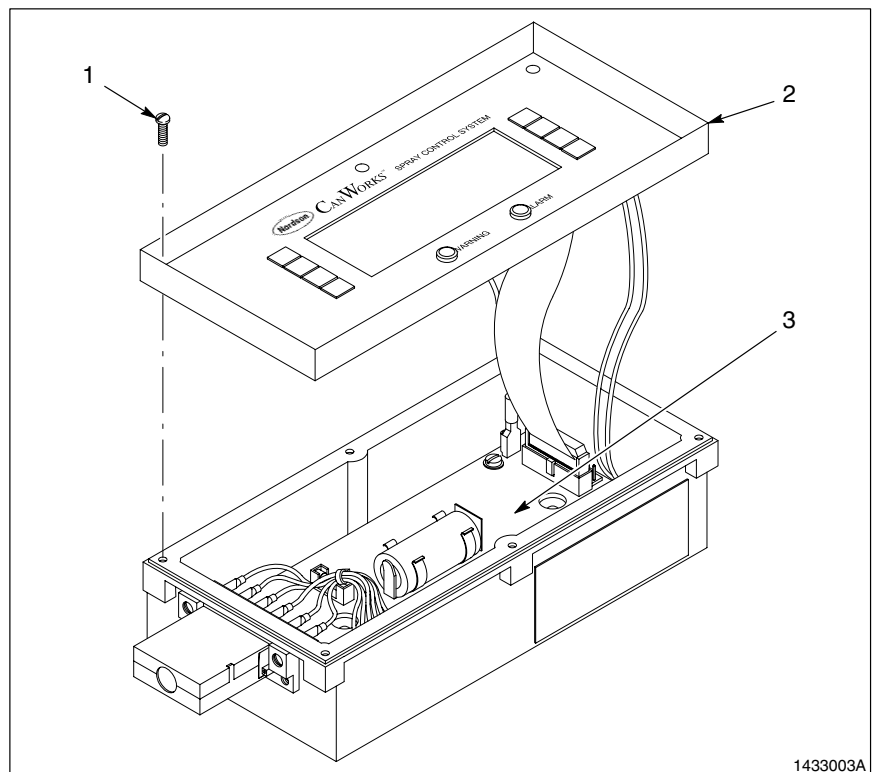


Fig. 4 Display Module

1. Screw

2. Front panel

3. Circuit board

Replace the Chipset

Follow these steps to replace the chip located on the display module circuit board.

NOTE: Be sure that you are wearing the wrist strap. For more information, refer to *Before Installing the Chipset*.

1. Remove the new chip from the anti-static bag in the replacement kit.

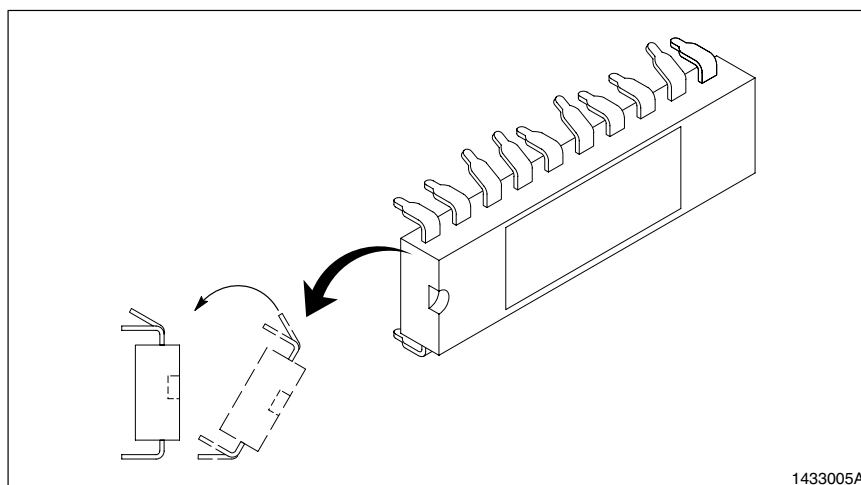
Refer to Table 2 for the chip label.

Table 2 Display Module Chip Label

Circuit Board	Chip U2 Label
UI-1	UI-1 U2

2. See Figure 5.

Check the chip for bent or broken pins. To improve alignment to the pin socket, gently push each side of the chip against a hard surface until the pins are perpendicular.



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Fig. 5 Straighten the Chip Pins

3. See Figure 6.

Install a chip:

- a. Line up the notch (2) on the chip (1) with the white outline notch on the circuit board. The notch should be on the right.
- b. Grasp the chip at the center edges and press it into place.

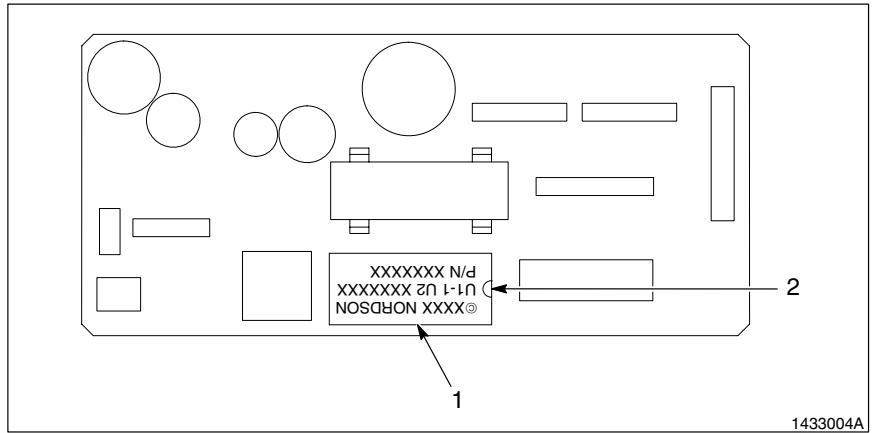


Fig. 6 Display Module Circuit Board with Chip Location

1. EPROM chip U2

2. Notch

Replace the Display Cover

Follow these steps to replace the CanWorks system display cover.

1. [See Figure 4.](#)

Check that the ribbon cable and wire connections are secure. Install the front panel (2).

2. Tighten the screws (1).

5. Parts

Nordson offers a wide selection of chipset replacement kits. Contact your Nordson representative to order the correct kit for your system.

The following parts are required for chipset installation and are included in each replacement kit. Refer to the information below if you need to order additional ground straps or removal tools.

Part	Description	Quantity
143958	Strap, ground	1
113735	Removal tool	1

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