

One-Gun Add-On Kit For Smart-Coat[®] Controllers

1. Introduction

This document contains procedures for installing a one-gun add-on kit to your Smart-Coat Controller. For additional information, refer to your *Smart-Coat Controller* manual and all other related documentation. If you require more information or assistance, contact your Nordson Corporation representative.

2. Description

This service kit contains the Smart-Coat Controller components required to add one gun to an existing Smart-Coat system. The kit includes:

- a Smart-Coat Controller card
- a voltage-to-pressure regulator
- an air solenoid valve
- all of the required harnesses and tubing

Install these components into the next available slot/position in the existing Smart-Coat Controller enclosure.

NOTE: You must change the system configuration in the Versa-Screen 486 Operator Interface to tell the system there is an additional gun. You must also configure all of the gun settings before the gun will operate.

3. Installation



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



WARNING: Disconnect, lock out, and tag electrical power at a disconnect or breaker in the service line ahead of electrical equipment before installing these components.

Front Panel Components

See Figures 4 and 5 to reference the electrical schematics for the Smart-Coat controller.

Open the front door of the enclosure and locate the next open slot in the card cage on the front panel.

Voltage-to-Pressure Regulator Harness

Follow these procedures to install the voltage-to-pressure regulator harness:

1. Plug the 16-pin connector into the appropriate mating connector at the top edge of the back-plane circuit board. For example, if the next available slot in the card cage is the fifth position, the connector is labeled P500 and is located directly above the fifth slot.
2. Open up the wiring duct above the card cage by unsnapping the duct cover.
3. Lay the harness into the wiring duct and then feed the other end of the harness through the pass-through hole to the right of the duct.

NOTE: This harness has to pass through both the front and back panels to the back of the enclosure.

Solenoid Valve Harness

Follow these procedures to install the solenoid valve harness:

1. Plug the 3-pin connector into the appropriate mating connector at the bottom edge of the back-plane circuit board. For example, if the next available slot in the card cage is the fifth position, the connector is labeled P502 and is located directly below the fifth slot.
2. Open up the wiring duct directly below the card cage by unsnapping the duct cover.
3. Lay the harness into the wiring duct and then feed the other end of the harness through the pass-through hole below and to the right of the wiring duct.

NOTE: This harness has to pass through both panel holes into the back of the enclosure.

Smart-Coat Controller Card



CAUTION: Risk of equipment damage. Always use an electrostatic discharge (ESD) wrist strap when handling any printed circuit board. Failure to observe this caution can result in equipment damage.

Follow these procedures to install the Smart-Coat controller card:

1. See Figure 1.

NOTE: This procedure is typical for most applications. Always consult your Nordson Corporation representative for assistance.

Set the new card's address at the address switches (3). Look at the address of the card to the left of the open slot. The new card's address will be one number higher in the address sequence. For example, if the last card's switches read ID #1 = 1, ID #2 = 11, set the new card's switches to ID #1 = 1, ID #2 = 12.

2. Slide the card into the card cage and press firmly on its front panel to seat the card into the back-plane connector.
3. Tighten the two mounting screws (1) on the card's front panel.

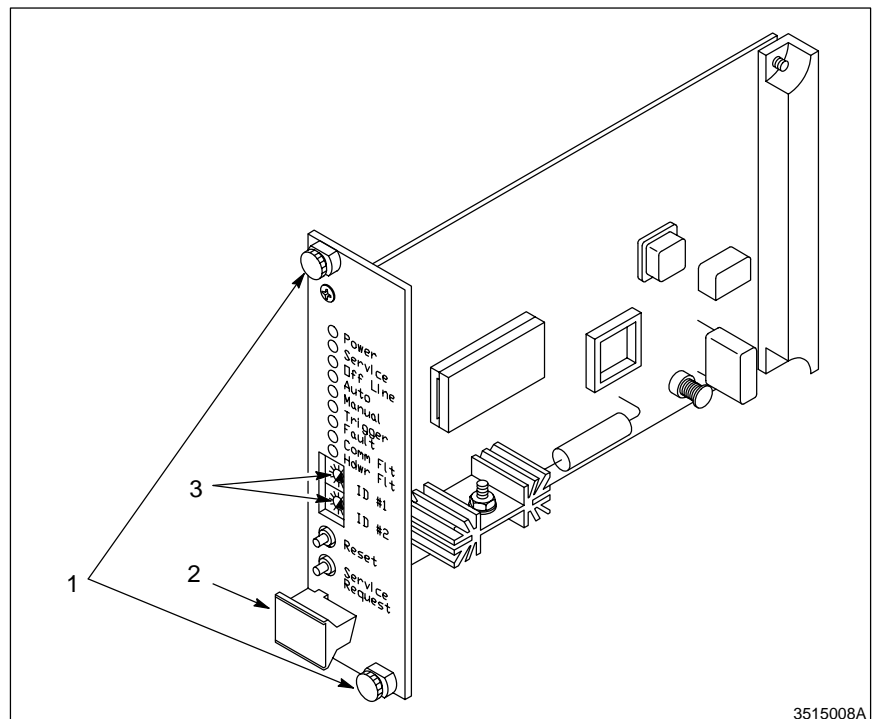


Fig. 1 Smart-Coat controller card

- | | |
|-----------------|---------------------|
| 1. Screws | 3. Address switches |
| 2. Ejector knob | |

Completing the Installation

Perform the following steps:

1. Snap all of the wiring duct covers back on.
2. Close and lock the front door of the enclosure.

Back Panel and Back Door Components

Follow these procedures to install the various components in the back panel and back door.

Voltage-to-Pressure Regulator



WARNING: Be sure to shut off and relieve the main air supply to the Smart-Coat enclosure before performing this procedure.

See Figures 6 and 7 to reference pneumatic schematic for the Smart-Coat controller.

Follow these procedures to install the voltage-to-pressure regulator:

1. Unscrew the blank panel on the back door for the next available voltage-to-pressure regulator.
2. Mount the new voltage-to-pressure regulator into the cut-out on the back door.
3. See Figure 2. Secure the voltage-to-pressure regulator with the four screws (3).

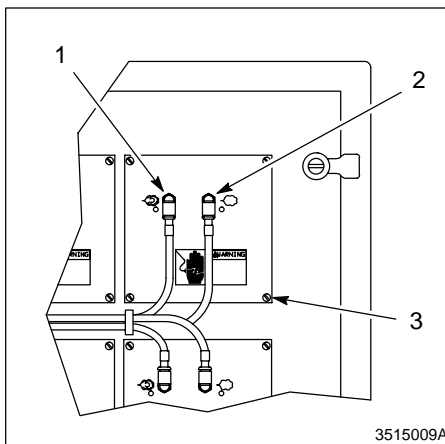


Fig. 2 Front panel of voltage-to-pressure regulator

1. Air line connector (flow air)
2. Air line connector (atomizing air)
3. Screws

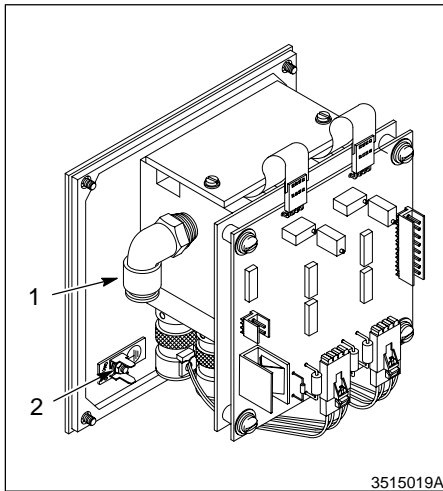


Fig. 3 Voltage-to-pressure regulator

1. Air line connector
2. Ground terminal

Voltage-to-Pressure Regulator (contd.)

4. Connect the two electrical connectors from the voltage-to-pressure regulator wiring harness to connectors P1 and P2 on voltage-to-pressure regulator circuit board.
5. Remove one 10-mm tube plug from the air manifold inside the back of the enclosure.
6. See Figure 3. Connect the blue, 10-mm air tubing from the air manifold fitting to the input air fitting (1).
7. If there is not already a ground wire harness going to the new voltage-to-pressure regulator, use the ground wire harness in this kit. Connect the ground wire harness between the door's ground stud and the voltage-to-pressure regulator ground stud terminal (2).
8. Bundle the wiring and tubing to the regulator along with the existing wire and tube bundles.

Solenoid Valve



WARNING: Be sure to shut off and relieve the main air supply to the Smart-Coat enclosure before performing this procedure.

See Figures 6 and 7 to reference the pneumatic schematics for the Smart-Coat controller.

Follow these procedures to install the solenoid valve:

1. Unscrew the blank plate on the first available position on the purge solenoid manifold on the back panel.
2. Screw the 6-mm elbow fitting into the port at the top of the solenoid valve.
3. Mount the new solenoid valve in the open position. Be sure to use the gasket.
4. Cut a length of black, 6-mm tubing to fit between the solenoid valve and the bulkhead fittings at the back of the enclosure. Connect the tubing to the solenoid valve.

Solenoid Valve (contd.)

5. Remove the plastic plug on the back of the enclosure.
6. Install the 6-mm bulkhead fitting using the nylon sealing washer on the outside of the enclosure.
7. Connect the tubing from step 4 to the bulkhead fitting.
8. Close and lock the back door.

Air Output Tubing to 10-Tube Quick Disconnect Fittings

See Figures 6 and 7 to reference the pneumatic schematics for the Smart-Coat controller.

Follow these procedures to connect the air output tubing to the 10-tube quick disconnect fittings:

1. [See Figure 3](#). Cut and connect the 6-mm black tubing to the air line connector (1) for the flow air output and the 6-mm blue tubing to the air line connector (2) for the atomizing air output from the voltage-to-pressure regulator to the appropriate 10-tube connectors.
2. Connect both air lines from the regulator to the quick disconnect fittings.
3. Bundle this tubing on the back of the enclosure along with the existing tubing.

4. Start-Up

Turn on the electrical power and air supply to the enclosure. Once the system is re-configured and you program the operating parameters for the new controller, the new gun is ready to operate.

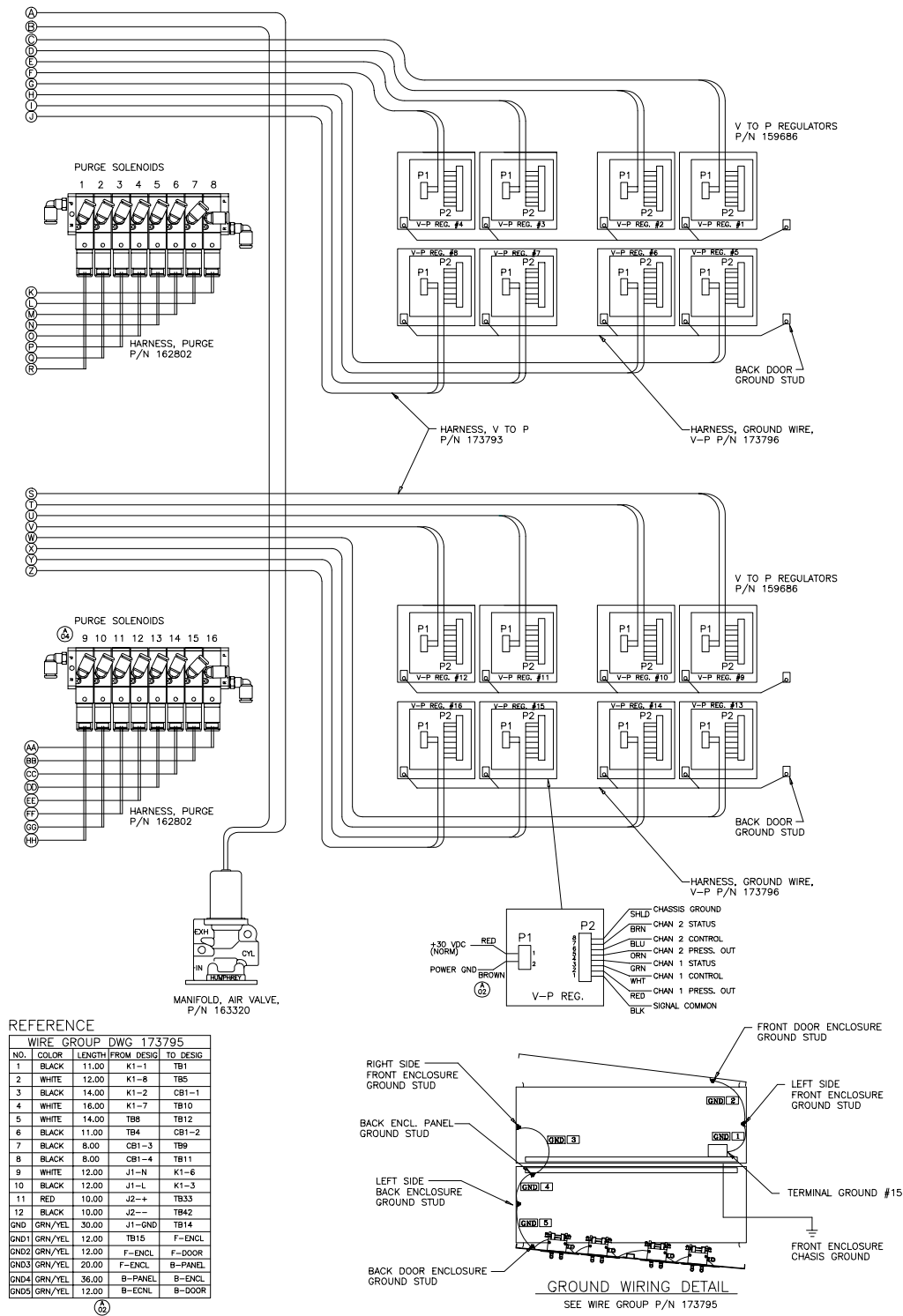
Refer to your system documentation to determine the Smart-Coat recipes and presets for the new guns. Enter all information via the system operation interface.

5. Parts

The parts list below contains ordering information for the One-Gun Add-On Kit for Smart-Coat Controllers. If you require assistance in ordering, contact your Nordson Corporation representative.

Part	Description	Note
187 044	Service kit, one-gun, Smart-Coat controller	1
113 626	• Panel, mounting, with voltage-to-pressure regulator, 2 ch	1
162 786	• PCA, configured control board, Smart-Coat (controller card)	1
-----	• Harness, purge solenoid, Smart-Pack	1
163 321	• Valve, solenoid, 3-port, 24 Vdc	1
-----	• Harness, voltage-to-pressure regulator Smart-Coat	1
-----	• Harness, ground wire, voltage-to-pressure regulator	1
900 740	• Tubing, polyurethane, 10/6.5–7-mm, 5 feet	1
900 741	• Tubing, polyurethane, 6/4-mm, blk, 16 feet	1
900 742	• Tubing, polyurethane, 6/4-mm, blue, 10 feet	1
939 004	• Strap, cable, 0.06–1.75, natural	12
971 778	• Union, bulkhead, 6-mm tubing	1
972 126	• Elbow, male, 6-mm tube x 1/8 uni	1
983 450	• Washer, 0.562 x 0.718 x 0.03, nylon	1

6. Schematics (contd.)



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Fig. 5 Smart-Coat controller electrical schematic (2 of 2)

6. Schematics (contd.)

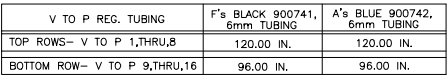
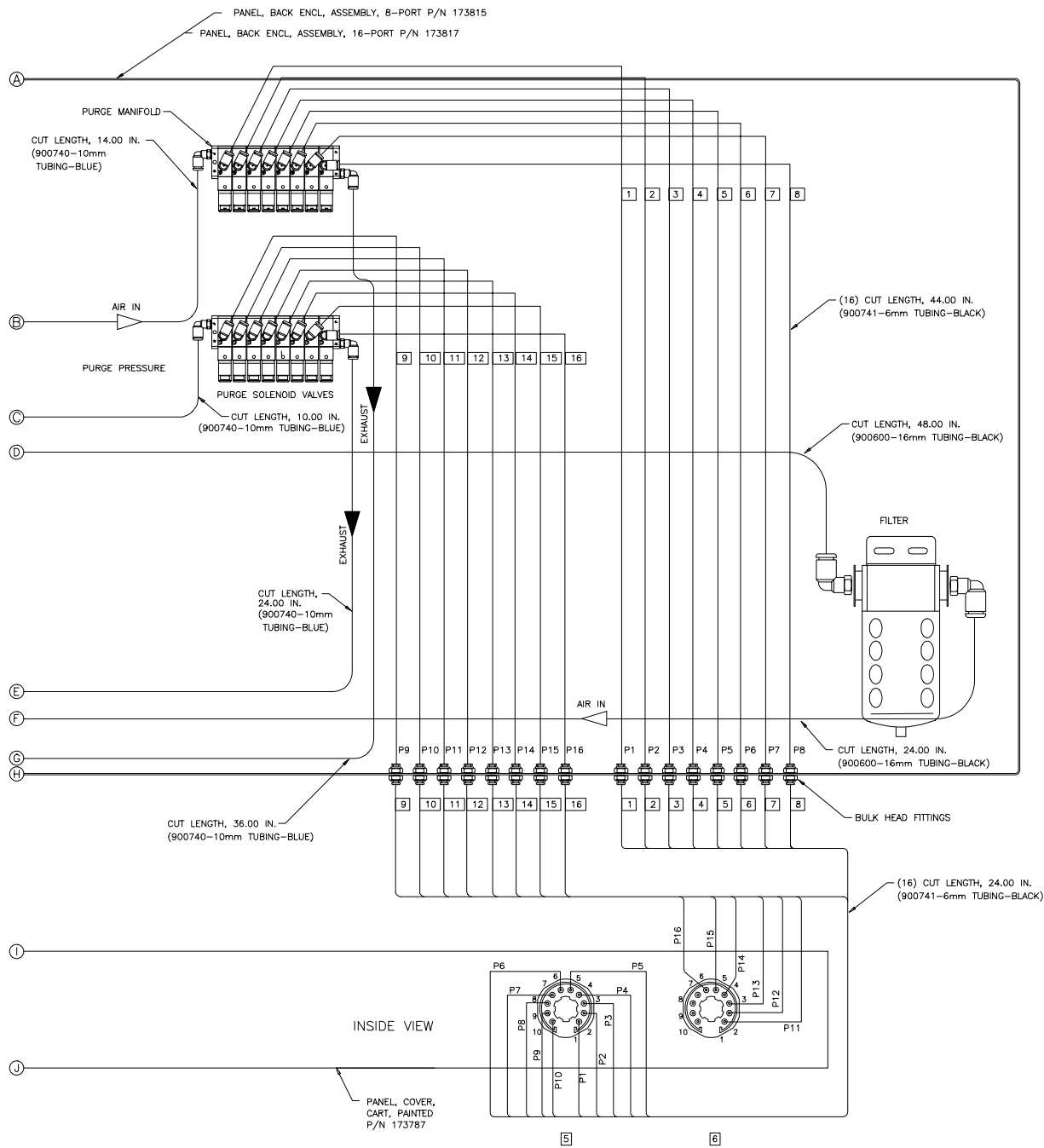


Fig. 6 Smart-Coat controller pneumatic schematic (1 of 2)

6. Schematics (contd.)



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Fig. 7 Smart-Coat controller pneumatic schematic (2 of 2)

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