INSTRUCTIONS-PARTS LIST

308592

This manual contains important information.   **READ AND KEEP FOR REFERENCE.**

INSTRUCTIONS

GRACO

Model 238025

REMOTE TERMINAL STRIP

For use on H$_2$O PRO Batch Waterborne Voltage Block 237927
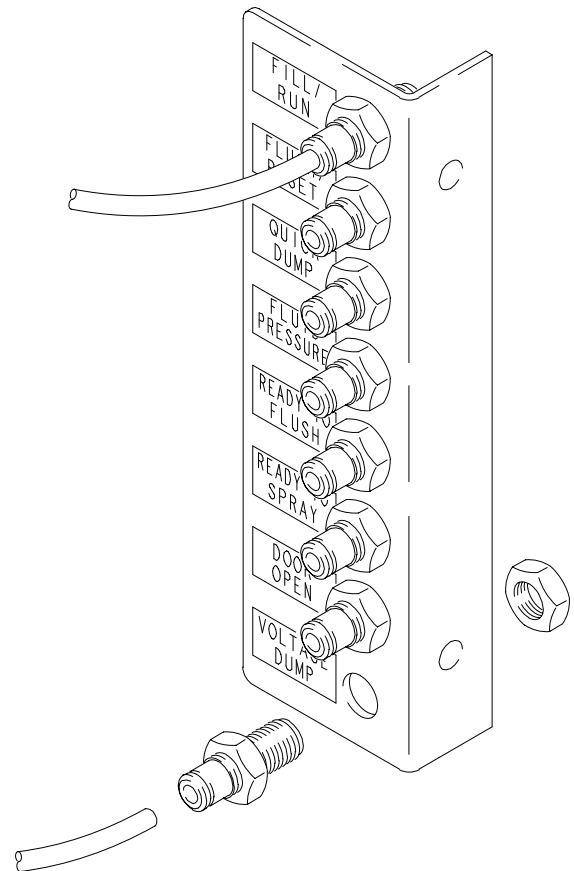
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Installation

General

The remote terminal strip provides 8 ports to an external control device such as a programmable logic controller (PLC) system. The remote terminal strip is mounted inside the clear plastic cover of the air logic assembly.

Port Identification

The 8 ports in the air logic circuit and their description are:

Port	Name	Description
1	FILL/RUN	Input air signal (minimum 60 psi [4.1 bar]) from an external controller that duplicates the **FILL/RUN** button on the voltage block door.
2	FLUSH/RESET	Input air signal (minimum 60 psi [4.1 bar]) from an external controller that duplicates the **FLUSH/RESET** button on the voltage block door.
3	QUICK DUMP	Input air signal (minimum 60 psi [4.1 bar]) from an external controller that duplicates the function of opening the voltage block door to initiate the **paint saver** option. In order for this function to operate, the installation must also be set up to activate color change valves, to close the paint inlet line and open a dump valve line.
4	FLUID PRESSURE	Input air signal from an external controller that duplicates the air pressure setting from the air pilot regulator on the voltage block door, which controls the fluid regulator.
5	READY TO FLUSH	Output air signal to an external controller or indicator to signal when the accumulator has dispensed the fluid and is in the empty position, ready for water flushing.
6	READY TO SPRAY	Output air signal to an external controller or indicator to signal when the accumulator is full and has actuated its full level switch.
7	DOOR OPEN	Output air signal to an external controller or indicator to signal when the door switch is activated open and it is in an unsafe condition for spraying.
8	VOLTAGE DUMP	Input air signal from an external controller that duplicates the door open switch operation that sends the isolator down to immediately ground out the high voltage charge of the fluid.

Materials

Polyethylene 5/32 in. (4 mm) OD tubing is required to connect to the remote terminal strip ports. This tubing is available from Graco in 100 ft (30.5 m) lengths. The Tubing Selection Table lists part numbers and colors.

Tubing Selection

Tubing Part No.	Color
054730	Natural (clear)
054731	Blue
054732	Red
054733	Yellow
054734	Black

NOTE: All tubing connections are push-in type fittings to connect. Insure tubing is pushed in firmly until bottomed out. To disconnect, push the fitting sleeve forward while pulling back on the tube.

Installation

Install the remote terminal strip as follows:

Mount Remote Terminal Strip (Fig. 1)

1. Remove the clear plastic cover (A) over the air logic assembly.

2. Mount the remote terminal strip (6) on the clear plastic cover with the enclosed hardware (7, 8).

Change Pneumatic Logic (Fig. 2 & Fig. 3)

Fig. 2 shows the air logic assembly in the original configuration. Fig. 2 also shows the AND gate, OR gate and Tee that are discussed in the following procedure. Fig. 3 shows the air logic assembly after the following procedure has been performed.

> ## ⚠ CAUTION
>
> Be careful not to kink any of the air lines during installation, as this will impair performance.

1. **REMOTE FILL/RUN**

   a. Disconnect line 22 at first Tee from **FILL/RUN** switch (C, Fig. 1).

   b. Connect a new OR gate output to the Tee. Connect line 22 to one input of the OR gate.

   c. Cut and connect a new line from the remaining input of the OR gate to port 1 **REMOTE FILL/ RUN** of the remote terminal strip.

2. **REMOTE FLUSH**

   a. Disconnect line 23 at first Tee from **FLUSH/ RESET** switch (D, Fig. 1).

   b. Connect a new OR gate output to the Tee. Connect line 23 to one input of the OR gate.

   c. Cut and connect a new line from the remaining input of the OR gate to the input of port 2 **RE- MOTE FLUSH** of the remote terminal strip.

3. **QUICK DUMP**

   a. Disconnect line 23 from OR gate 01.

   b. Install the output of a new OR gate into OR gate 01. Connect line 23 to one input of the new OR gate.

   c. Cut and connect a new line (approximately 4 in.) to the other input of the OR gate.

   d. Connect a Tee to the end of the new line. Color this Tee black with a magic marker.

   e. Disconnect line 22 from OR gate 05. Connect the output of second OR gate to this input of OR gate 05.

   f. Connect line 22 into one input of the second OR gate.

   g. Connect a new line from the other input of the second OR gate to the Tee installed in step d.

   h. Connect a new line from the remaining input of the Tee installed in step d. to the input of port 3 **QUICK DUMP** of the remote terminal strip.

4. **FLUID PRESSURE**

   a. Disconnect the output port line (E, Fig. 1) (right side) from the air pilot regulator 110438.

   b. Insert this line into port 4 **FLUID PRESSURE** on the remote terminal strip.

   c. Disconnect the gauge port line (F, Fig. 1) (top) from the regulator.

   d. Plug both of the open ports of the regulator with 113279 port plugs (4).

5. **READY TO FLUSH**

    a. Cut line 41 between the B output of V3 and the OR gate 03.

    b. Install a Tee between the cut lines.

    c. Cut line 21 between AND gate A2 and AND gate A3.

    d. Insert a Tee between the cut lines.

    e. Insert an AND gate output into port 5 **READY TO FLUSH** of the remote terminal strip.

    f. Cut and connect a new line from each of the two Tees and insert them into the two inputs of the AND gate in port 5.

6. **READY TO SPRAY**

    a. Cut line 27 approximately 2 in. from the B output of V1.

    b. Install a Tee between the cut lines.

    c. Cut and connect a new line from the Tee to the input of port 6 **READY TO FLUSH** of the remote terminal strip.

7. **DOOR OPEN**

    a. Cut the red line 25.

    b. Install a Tee between the two cut lines.

    c. Cut and connect a new line from the Tee to the input of port 7 **DOOR OPEN** of the remote terminal strip.

8. **VOLTAGE DUMP**

    a. If the 3. **QUICK DUMP** procedure has been performed, go to step b. If the 3. **QUICK DUMP** procedure has not been performed, perform the 3. **QUICK DUMP** procedure and then go to step b.

    b. Disconnect the line from port 3 **QUICK DUMP** of the remote terminal strip at the black marked Tee installed in step d. of the **QUICK DUMP** procedure.

    c. Insert an OR gate output into the black marked Tee.

    d. Connect a line from port 3 into one of the inputs of the OR gate.

    e. Cut and connect a line from the remaining input of the OR gate to port 8 **VOLTAGE DUMP** of the remote terminal strip.
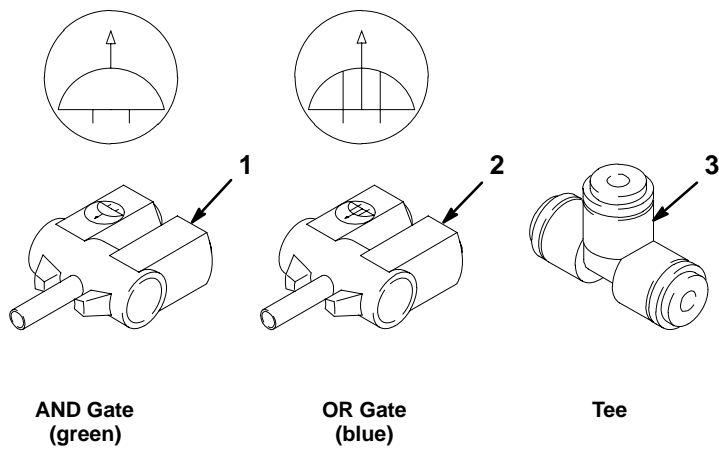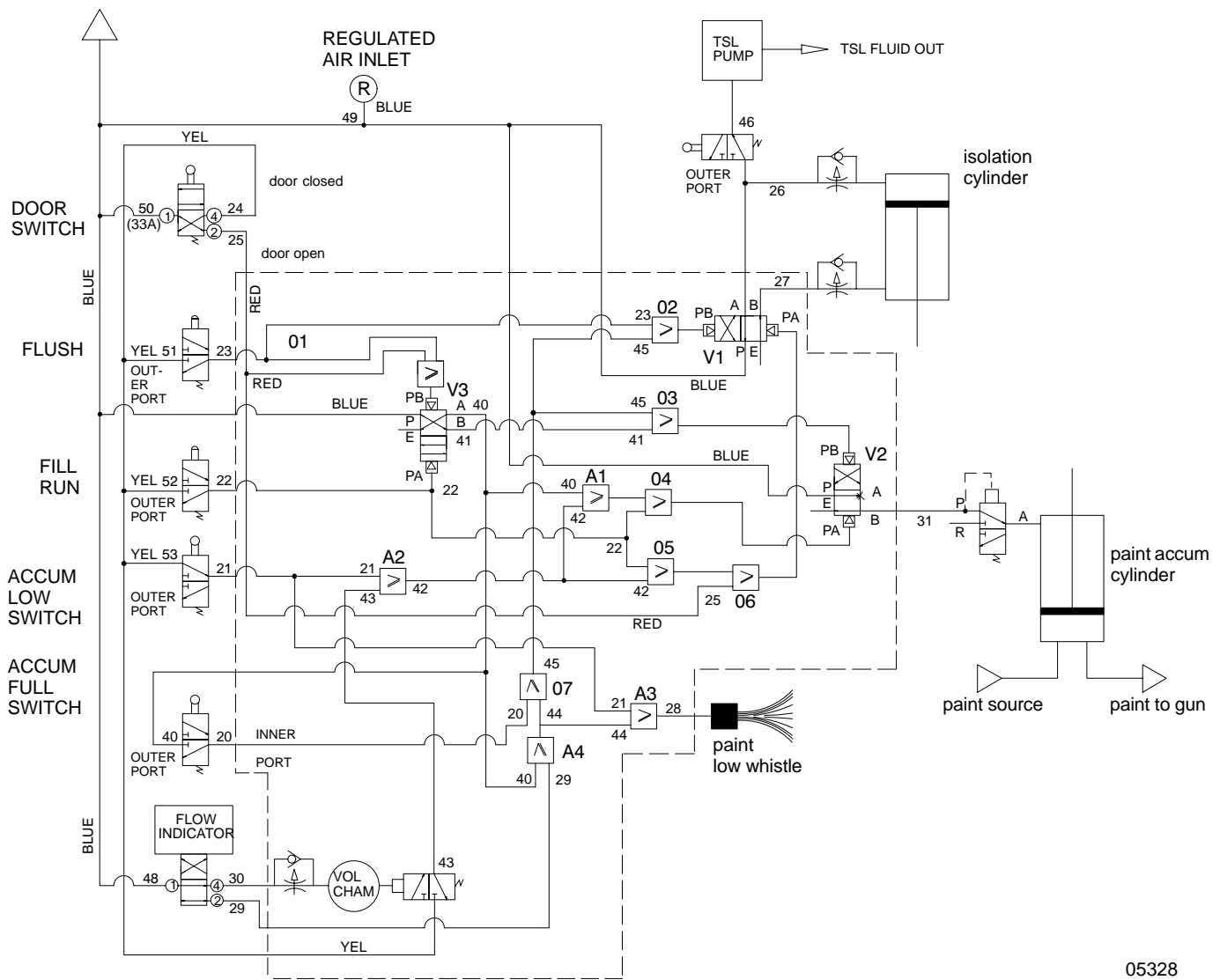
Unused Ports

Plug the open sides of remote terminal port 5, **READY TO FLUSH**; port 6, **READY TO SPRAY**; and port 7, **DOOR OPEN**; when they are not in use. Use plug 113279.

B Output

V1

C

D

8

4

A

F

5

7

E

V3

5

6

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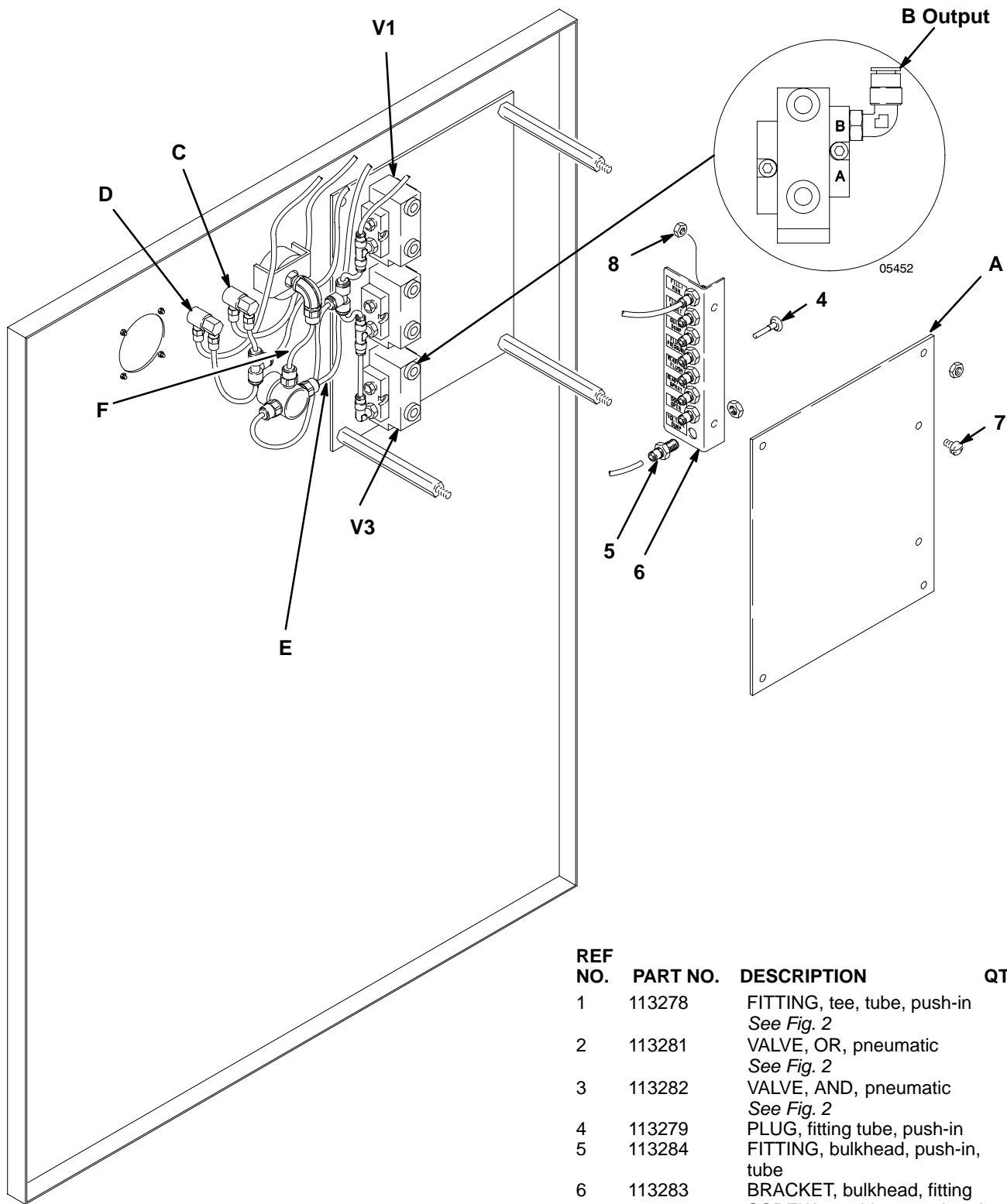
REF NO.	PART NO.	DESCRIPTION	QTY
1	113278	FITTING, tee, tube, push-in *See Fig. 2*	5
2	113281	VALVE, OR, pneumatic *See Fig. 2*	5
3	113282	VALVE, AND, pneumatic *See Fig. 2*	1
4	113279	PLUG, fitting tube, push-in	3
5	113284	FITTING, bulkhead, push-in, tube	8
6	113283	BRACKET, bulkhead, fitting	1
7	100609	SCREW, machine, pan head	2
8	100015	NUT, hex	2

Fig. 1

05421

REGULATED AIR INLET

TSL PUMP → TSL FLUID OUT

DOOR SWITCH

FLUSH

FILL RUN

ACCUM LOW SWITCH

ACCUM FULL SWITCH

isolation cylinder

paint accum cylinder

paint source   paint to gun

paint low whistle

FLOW INDICATOR

VOL CHAM

05328

AND Gate (green)

OR Gate (blue)

Tee

05422

Fig. 2

Fig. 3

QUICK DUMP

VOLT/DUMP

REMOTE FLUSH

REMOTE FILL/RUN

DOOR OPEN

READY TO FLUSH

READY TO SPRAY

DOOR SWITCH

FLUSH

FILL RUN

ACCUM LOW SWITCH

ACCUM FULL SWITCH

REGULATED AIR INLET

TSL PUMP

TSL FLUID OUT

isolation cylinder

paint accum. cylinder

paint source

paint to gun

paint low whistle

FLOW INDICATOR

VOL CHAM

INNER PORT

OUTER PORT

OUTER PORT

OUTER PORT

OUTER PORT

OUTER PORT

AND

BLUE

RED

RED

BLUE

BLUE

BLUE

RED

YEL

YEL

BLUE

door closed

door open

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Manual Change Summary

The manual is revised per ECO Z001332.

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:
1–800–367–4023 Toll Free