

500 Series Enhancement Kits

1. Introduction

The 500 Series Enhancement Kits improve the performance of older Nordson 500 Series Powder Coating System booths. Use the kits to upgrade your fan section, color module, and final filters.

Since the contents of the kits vary depending on the booth model and type, the installation procedures required to install the kits also vary. Use Table 1 and Figure 1 to find your color module and fan section model. Refer to the *Parts* section for kit part numbers.

Table 1 500 Series Booth Models

Color Module Model	Fan Section Model	No. of Cartridge Filters	Fan Section Color Module Type	Color Module Mouth Height mm (inches)
504T	504	4	Wedge	609 (24)
504	504	4	Wedge	762 (30)
512T	512T	12	Rectangular	609 (24)
512T	512	12	Wedge	609 (24)
512	512	12	Wedge	762 (30)
516T	516T	16	Rectangular	609 (24)
516T	516	16	Wedge	609 (24)
516	516	16	Wedge	762 (30)
518	518	18	Wedge	762 (30)
524	524	24	Wedge	762 (30)

NOTE: If you install a color module kit, you must install a fan section kit. You can install a fan section kit without installing a color module kit, but the performance gain will be minimal. You can install final filter kits separately.

1. Introduction (contd.)

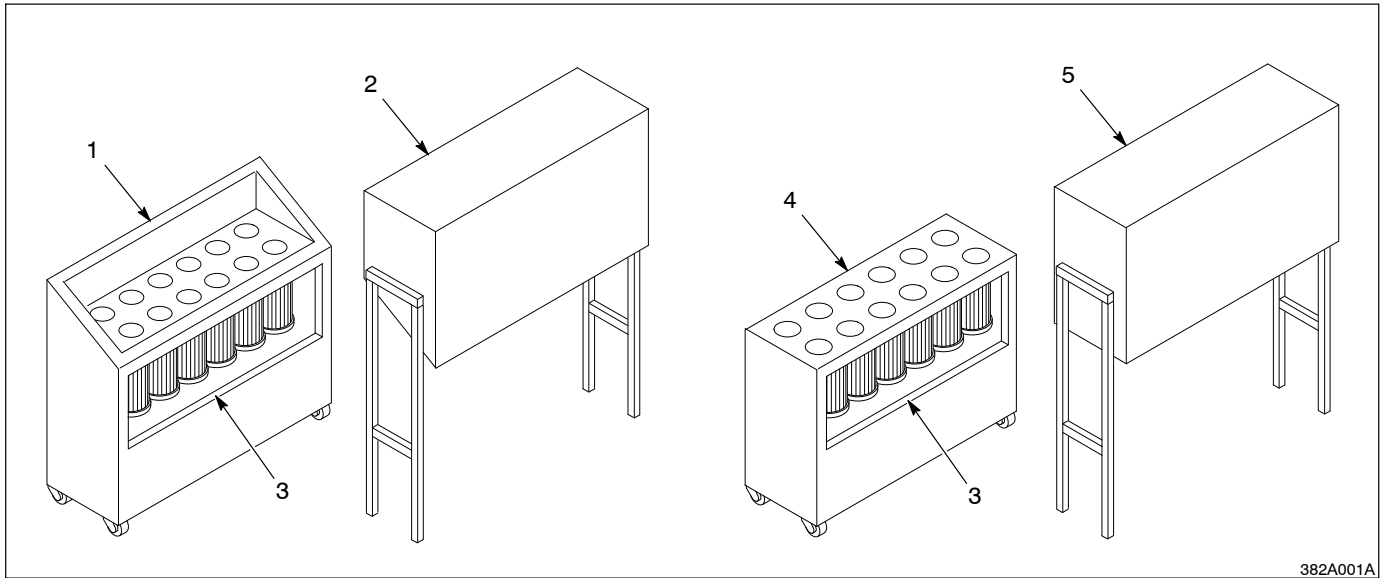


Fig. 1 Color module and fan section shapes

1. Wedge-shaped color module

2. Wedge-shaped fan section

3. Color module mouth

4. Rectangular color module

5. Rectangular fan section

2. Fan Section Kit 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: Before performing these procedures shut off the system electrical power and compressed air supply. Relieve the air pressure in the system. Lock out and tag the disconnect switch and shutoff valve. Failure to observe this warning could result in personal injury or property damage.

Table 2 shows the installation procedures required for the various fan section kits. Make sure you know your booth model before installing the kits.

Table 2 Fan Section Kit Installation Procedures

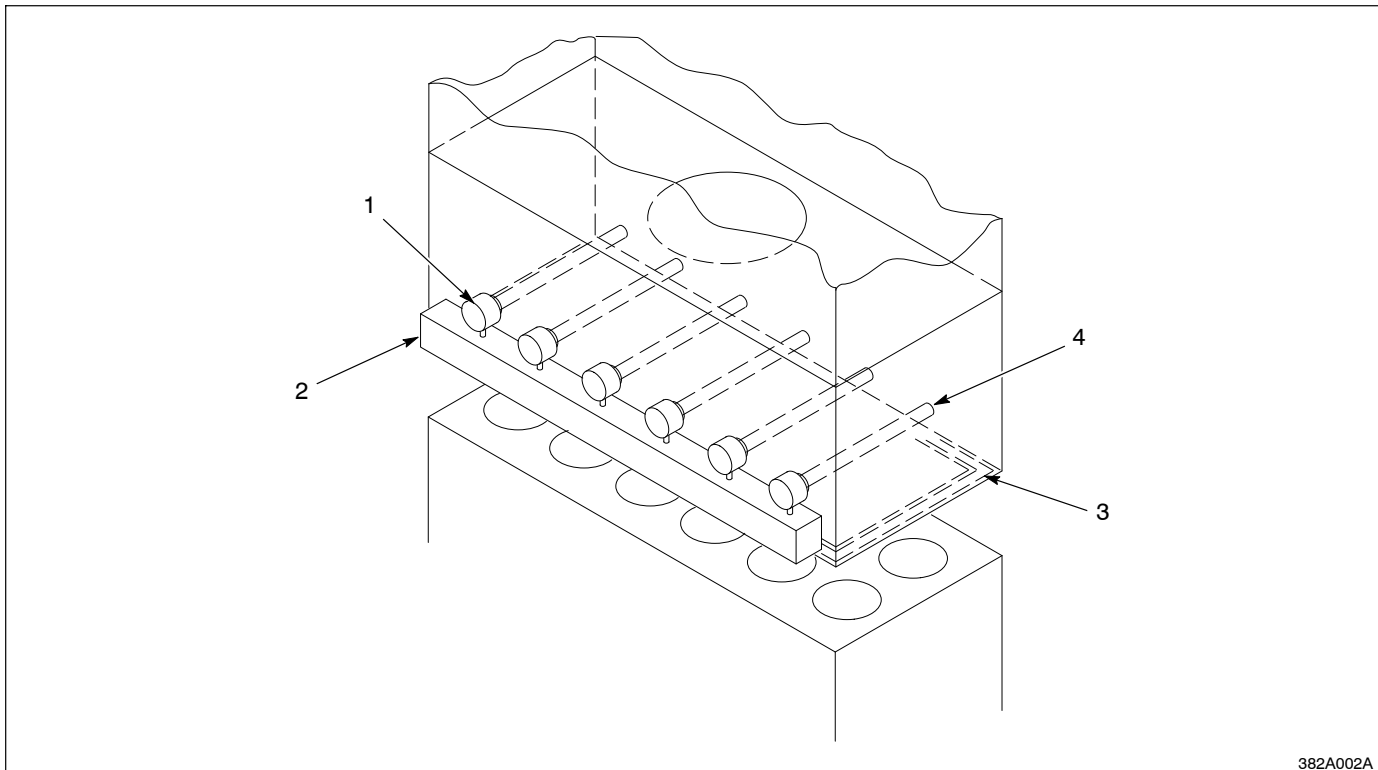
Installation Procedure	Model (Kit)						
	504, 504T (154 242)	512 (154 245)	512T (154 248)	516 (154 250)	516T (154 252)	518 (154 254)	524 (154 257)
D-Gasket	X	X	X	X	X	X	X
Pulse Valves and Nozzles	X	X	X	X	X	X	X
Pulse Valve Manifold			X		X		
Solenoid Enclosure(s)			X		X		
Timer Panel or Board			Panel		Panel	Board	Board

Preparation for Kit Installation

Perform these tasks before installing the fan section kits.

512T and 516T Booths

1. See Figure 2. Remove the old gasket (3) from the underside of the fan section. Remove all traces of powder, dirt, old gasket material, and adhesive.
2. Remove all of the old cartridge pulsing equipment, including the blow pipes (4), pulse valves (1), tubing, manifold (2), wiring, and timer panels. Do not remove the air volume control components (regulator, gauge, and gate valve) connected to the pulse manifold.
3. Plug the holes left in the fan section after removing the old equipment.



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Fig. 2 Preparation for kit installation—512T and 516T booths

- | | |
|-----------------|---------------|
| 1. Pulse valves | 3. Gasket |
| 2. Manifold | 4. Blow pipes |

All Other Booths

1. See Figure 3. Remove the old gasket (3) from the underside of the fan section. Remove all traces of powder, dirt, old gasket material, and adhesive.
2. Remove the pulse valves (2) from the pulse valve manifolds.
3. 518 and 524 booths: Remove the timer boards from the enclosures (1) and the wiring to the solenoid valves.

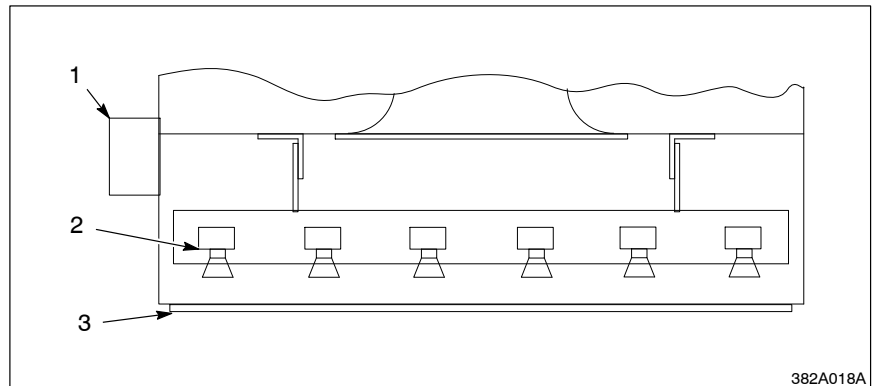


Fig. 3 Preparation for kit installation—all other booths

- | | |
|-----------------|-----------|
| 1. Enclosures | 3. Gasket |
| 2. Pulse valves | |

Pulse Valve Installation

1. See Figure 4. Wrap the new elbow fitting (3) and nozzle (1) threads with PTFE tape. Wrap the manifold nipple (2) threads with PTFE tape.
2. Install the elbow fittings and nozzles on the pulse valves (4). Tighten the fittings and nozzles securely with a wrench. The connections must not leak.
3. Install the pulse valves onto the manifold nipples. Tighten the valves on the nipples to form air-tight seals. The valves must point straight down.

NOTE: Kits for the 512T or 516T booths include a new pulse valve manifold. Install the new pulse valves on the new manifold.

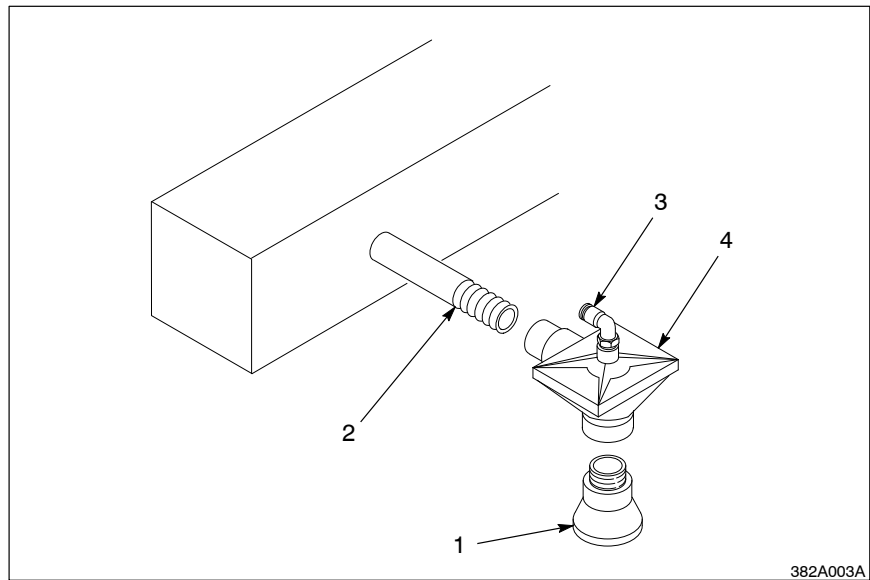
Pulse Valve Installation (contd.)

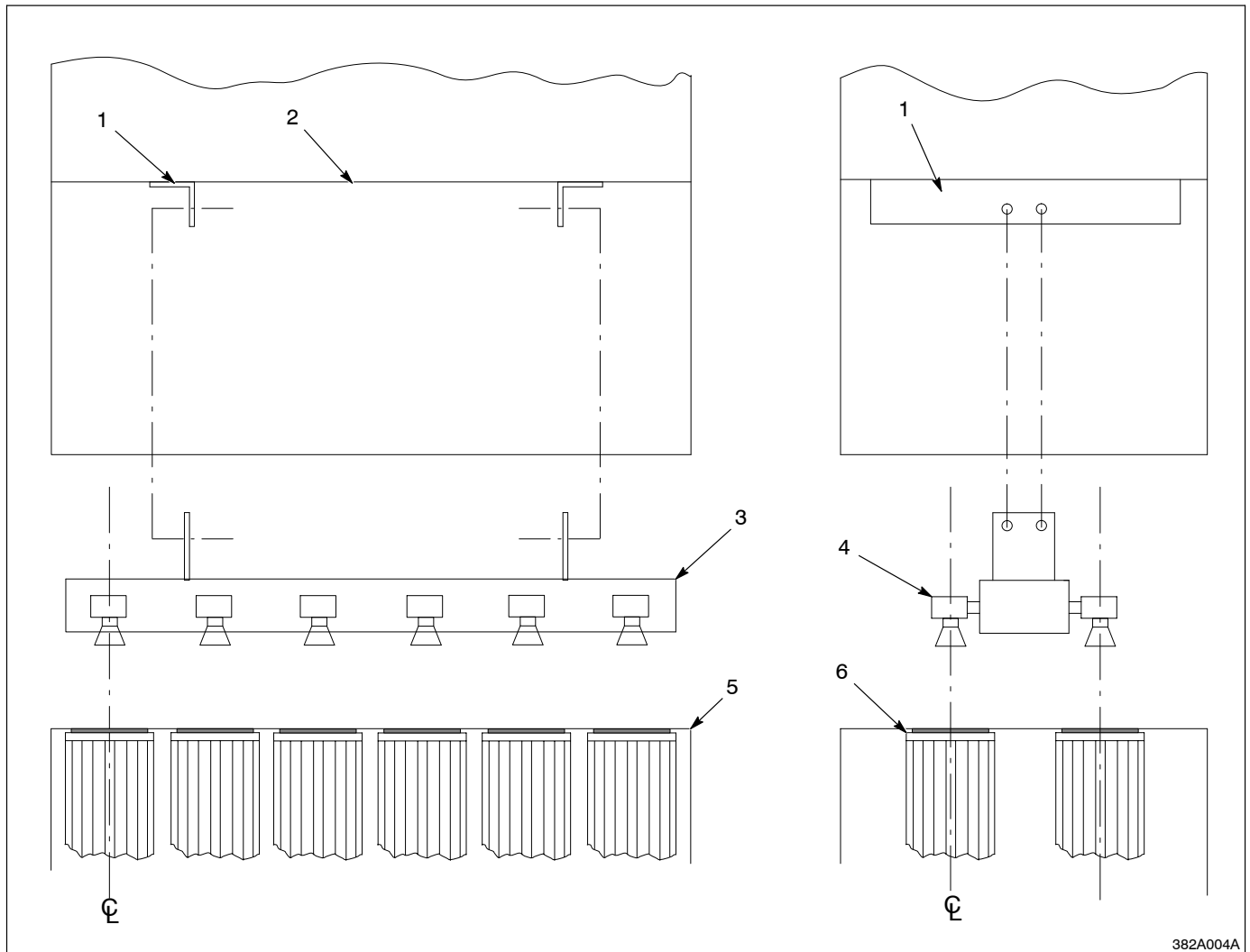
Fig. 4 New pulse valve installation

- | | |
|---------------------|-------------------|
| 1. Nozzles | 3. Elbow fittings |
| 2. Manifold nipples | 4. Pulse valves |

512T and 516T Pulse Valve Manifold Installation

1. See Figure 5. Weld or bolt two customer-supplied 2-in. angle brackets (1) to the plate (2) at the top of the compartment. If you bolt the brackets to the compartment, seal the bolt holes with RTV caulking compound. Locate the brackets as shown.
2. Mount the manifold (3) on the brackets. The manifold must be located so the pulse valves will be directly over the center of the cartridge filter (6) openings in the color module (5). Drill two holes in each bracket, spacing the holes the same distance apart as the holes in the manifold flange.
3. Provide air to the manifold from the air volume control through a $\frac{3}{4}$ -in. (minimum) air hose. This typically requires drilling a hole through the side of the compartment and installing a bulkhead fitting or coupling.

512T and 516T Pulse Valve Manifold Installation (contd.)

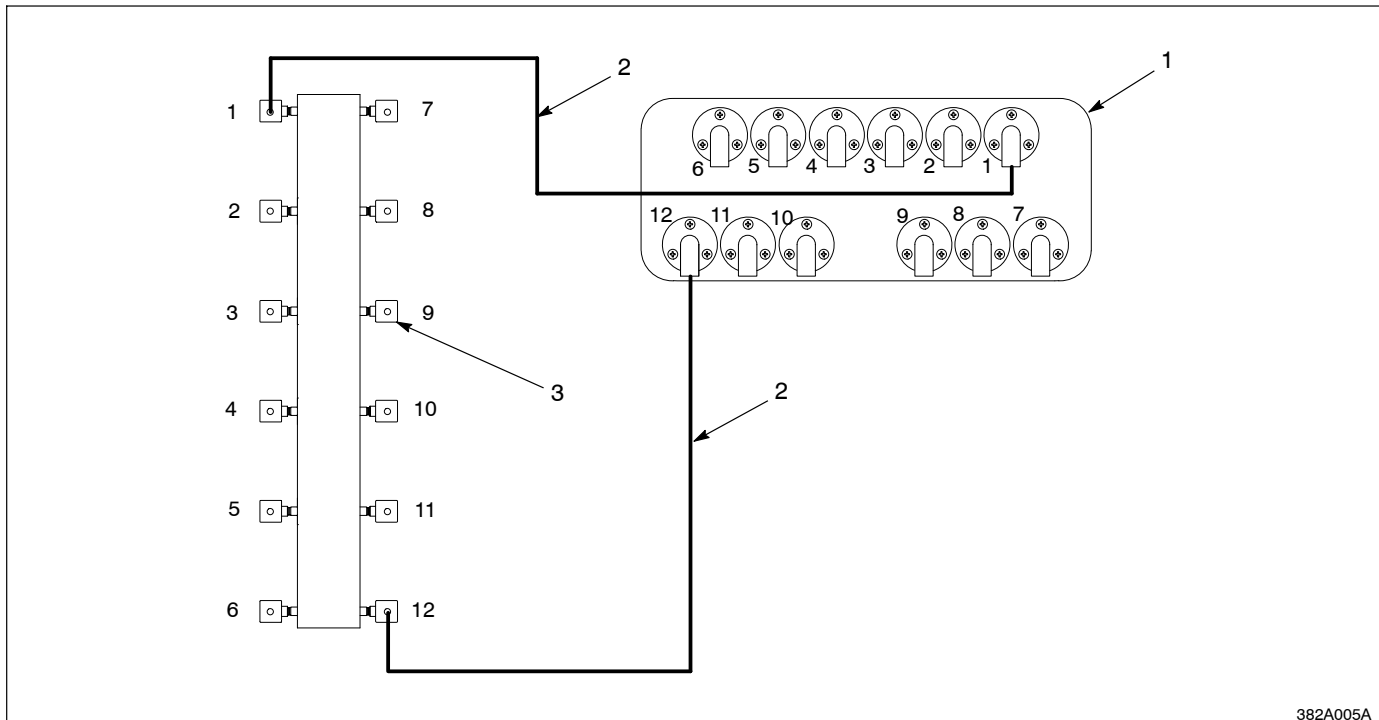


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Fig. 5 Installing the pulse valve manifold

512T and 516T Solenoid Enclosure Installation

1. See Figure 6. Mount the solenoid valve enclosures (1) inside the pulse valve compartment, preferably on one of the angle brackets supporting the pulse valve manifold.
2. Install $\frac{1}{4}$ -in air tubing (2) between the solenoid valves and the pulse valves (3) sequentially (from solenoid valve 1 to pulse valve 1, solenoid valve 2 to pulse valve 2 and so on). Cut the tubing to the shortest lengths possible. Use cable ties to bundle and secure the tubing.



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Fig. 6 Installing new solenoid valve enclosure

- | | |
|-----------------------------|-----------------|
| 1. Solenoid valve enclosure | 3. Pulse valves |
| 2. Air tubing | |

512T, 516T, 518, and 524 Timer Panel or Board Installation



WARNING: All electrical work must be done by a qualified electrician following standard safety practices. All wiring must conform to local codes. Failure to observe this warning could result in personal injury or property damage.

1. 512T and 516T booths:
 - a. Remove the old timer enclosure and timer board.
 - b. Install the new timer panel on the side of the pulse valve compartment.
2. 518 and 524 booths:
 - a. Remove the old timer board from the timer enclosure.
 - b. Install the new timer board in the enclosure.
3. See Figures 7 or 8. Connect the LINE, NEUTRAL, and GROUND wiring from the booth electrical panel to TB1 as shown.
4. Install flexible conduit and wiring from the output terminals to the solenoid enclosures. Connect the wiring to the solenoids sequentially (from terminal 1 to solenoid 1, terminal 2 to solenoid 2 and so on).
5. Adjust the timer boards as described in *Timer Board Adjustments*.

Timer Board Adjustments—512T, 516T, 518 Booths

1. See Figure 7. Make sure the jumper is set for the number of pulse valves in your booth.
2. Use the two adjustment screws labeled ON TIME (duration) and OFF TIME (delay) to adjust the settings. ON time is adjustable from 50 to 500 milliseconds. OFF time is adjustable from 1.5 to 30 seconds (range A) or from 8.5 to 180 seconds (range B).
 - Set the pulse delay (OFF) to 15 seconds.
 - Set the pulse duration (ON) to 0.07 seconds (70 milliseconds).
3. Turn on system power and compressed air and check your adjustments.

**512T, 516T, 518, and 524
Timer Panel or Board
Installation (contd.)**

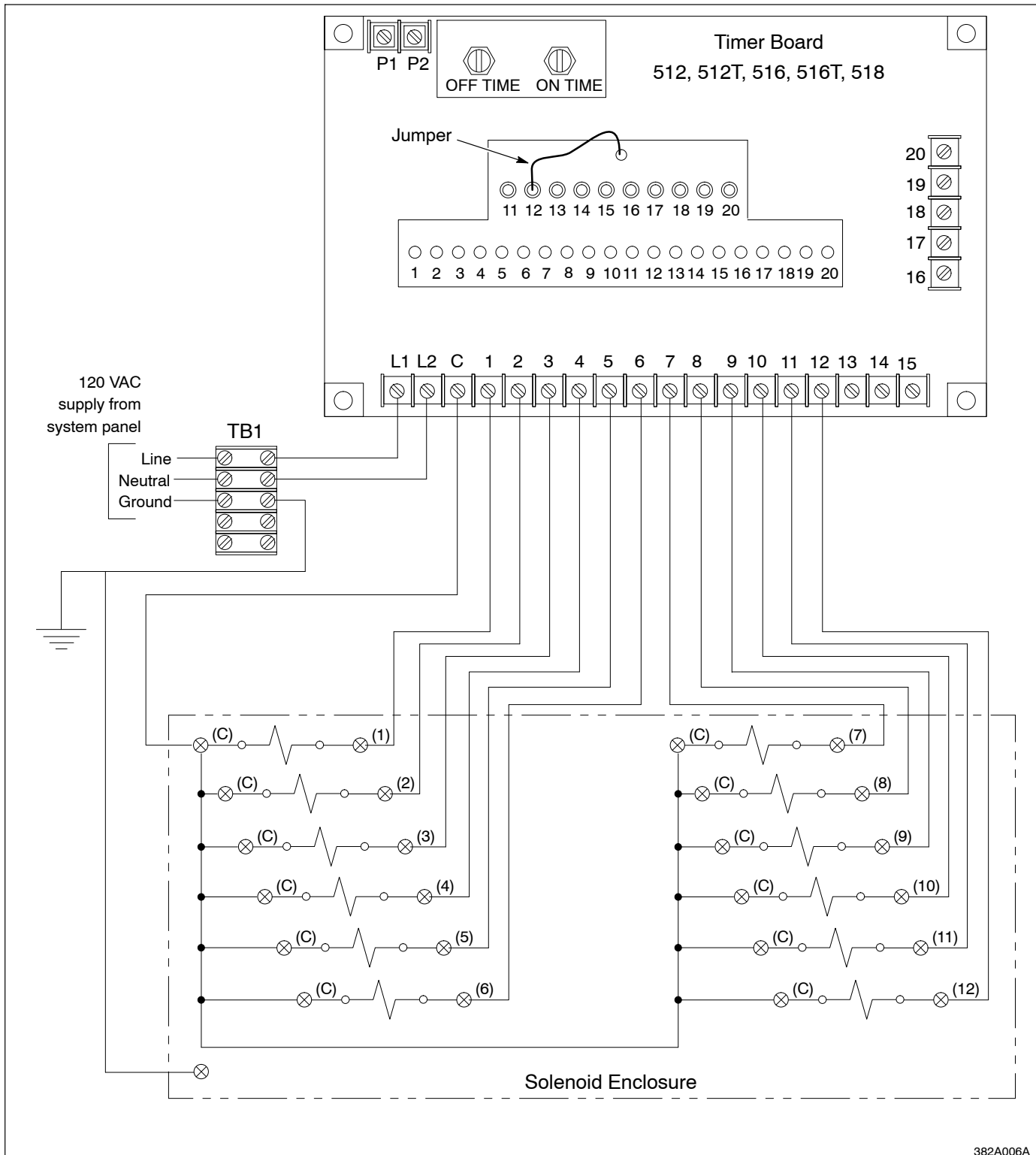


Fig. 7 Timer panel wiring and adjustment—512T, 516T, 518 booths

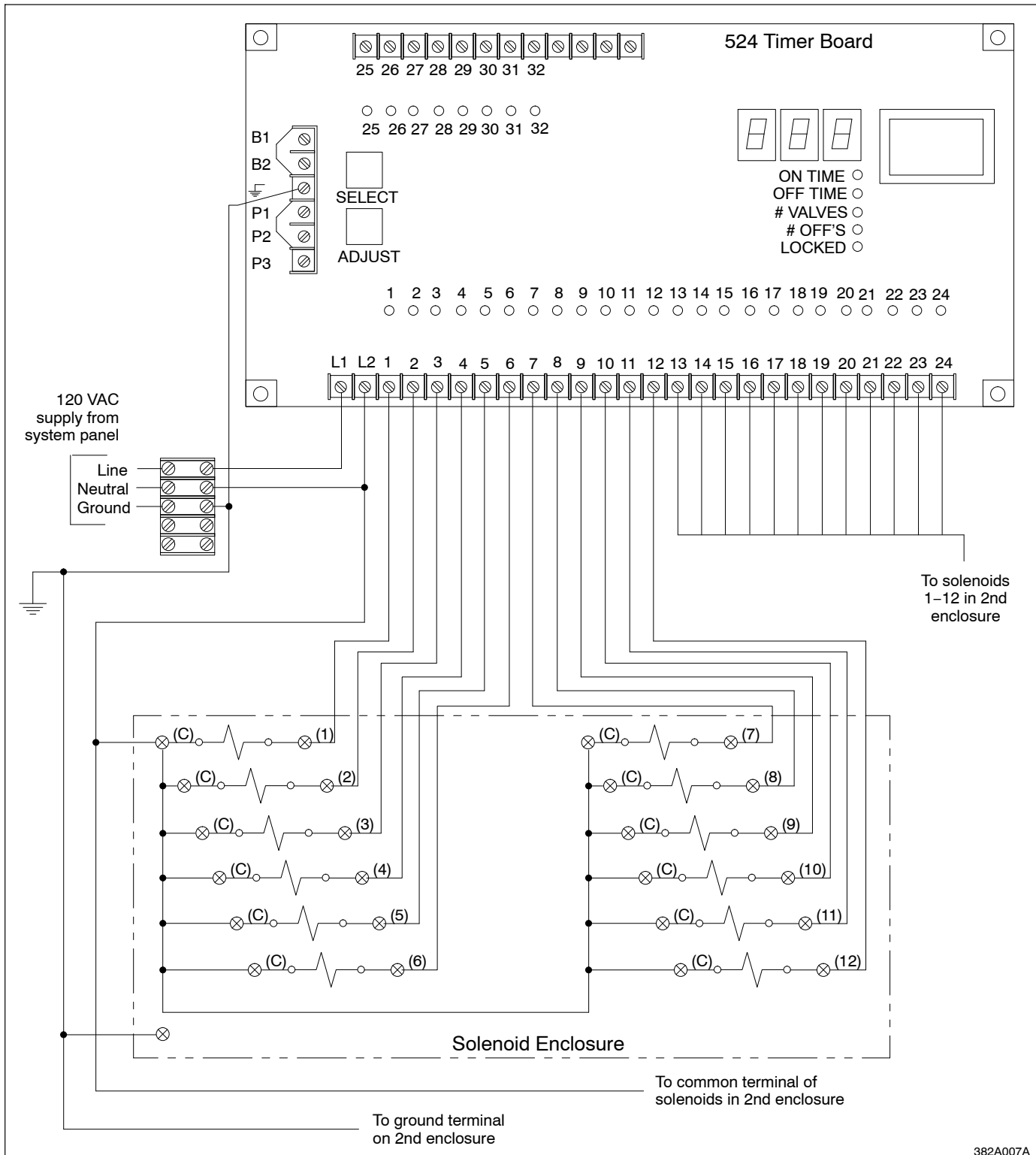
Timer Board Adjustments—524 Booths

1. Turn on system power.
2. See Figure 8. Press the SELECT button until the # VALVE LED indicator lights. Press the ADJUST button until the display shows 024 (24 valves).
3. Press the SELECT button until the OFF TIME LED indicator lights. Press the ADJUST button until the display shows 015 (15 seconds).
4. Press the SELECT button until the ON TIME LED indicator lights. Press the ADJUST button until the display shows 007 (70 milliseconds).
5. Press the SELECT button until the LOCKED LED indicator lights. This locks the settings you just made. The display will show the last setting made.

NOTE: The # OFF'S setting is not used for this application.

6. Turn on the compressed air supply and check your adjustments.

**512T, 516T, 518, and 524
Timer Panel or Board
Installation (contd.)**



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Fig. 8 Timer panel wiring and adjustment—524 booths

D-Gasket Installation

This procedure applies to all fan section kits.



WARNING: Before performing this procedure shut off the system electrical power and compressed air supply. Relieve the air pressure in the system. Lockout and tag the disconnect switch and shutoff valve.

1. Shut off the exhaust fan and turn off the air supply. Disconnect the color module from the booth base and roll it out from under the fan section.
2. Prepare the gasket mounting surface and the flat back of the gasket according to the instructions on the adhesive container provided with the kit. Make sure the fan-section mounting surface is clean.

NOTE: This procedure requires two or three people: one person to install the gasket, and one or two people to hold the gasket in place until the adhesive cures enough to hold the gasket in place.

3. Install the gasket as shown, with the inside edge of the gasket 6.4 mm ($1/4$ in.) away from the opening.
4. See Figure 9. Press the gasket firmly against the mounting surface, starting at the upper left-hand corner. Work across the top (A) and down the right-hand side (B). Then work down the left-hand side (C) and across the bottom (D). Do not stretch the gasket as you install it.
5. Make sure that no sections of the gasket come loose as the adhesive cures. Allow the adhesive to cure according to the instructions on the container.

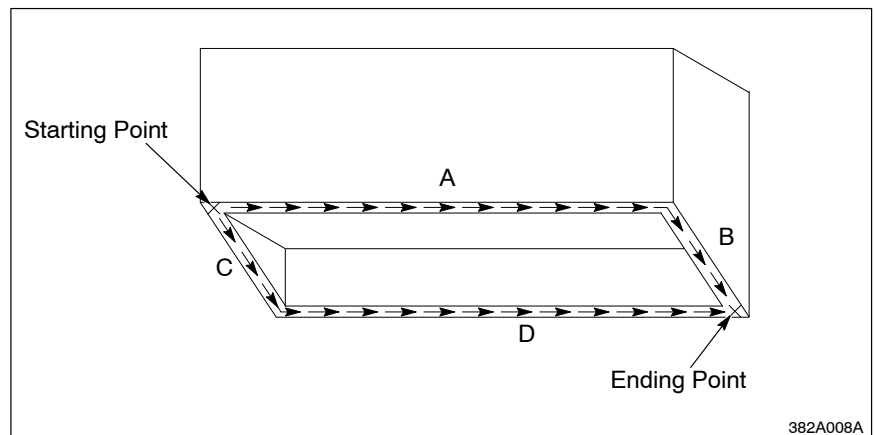


Fig. 9 D-gasket installation (wedge-shaped fan section shown)

3. Color Module Kit Installation



WARNING: Before performing these procedures shut off the system electrical power and compressed air supply. Relieve the air pressure in the system. Lock out and tag the disconnect switch and shutoff valve.

Installation procedures are the same for all color module kits. The kits include:

- new D-gasket for the color module mouth
- color module positive stops
- center mounts for cartridge filters
- baffles

NOTE: The kits do not include cartridge filters. Refer to the cartridge filter list in the *Parts* section for part numbers.

D-Gasket Installation

Install the D-gasket around the mouth of the color module. The gasket seals the color module to the booth-base inlet frame.

1. Shut off and lock out system electrical power and compressed air. Disconnect the color module from the booth base and roll it out from under the fan section.
2. See Figure 10. Remove the old gasket from around the color module mouth. Clean the gasket mounting surface thoroughly to remove all traces of powder, dirt, old gasket material, and adhesive.
3. Prepare the gasket mounting surface and the flat back of the gasket according to the instructions on the adhesive container.

NOTE: This procedure requires two or three people: one person to install the gasket, and one or two people to hold the gasket in place until the adhesive cures enough to hold the gasket in place.

4. Install the gasket as shown, with the inside edge of the gasket 6.4 mm ($\frac{1}{4}$ in.) away from the opening.

D-Gasket Installation (contd.)

5. Press the gasket firmly against the mounting surface, starting at the upper left-hand corner. Work across the top (A) and down the right-hand side (B). Then work down the left-hand side (C) and across the bottom (D). Do not stretch the gasket as you install it.
6. Make sure no sections of the gasket come loose as the adhesive cures. Allow the adhesive to cure according to the instructions.
7. Install positive stops as described in *Positive Stop Installation* before reconnecting the color module to the booth base and fan section.

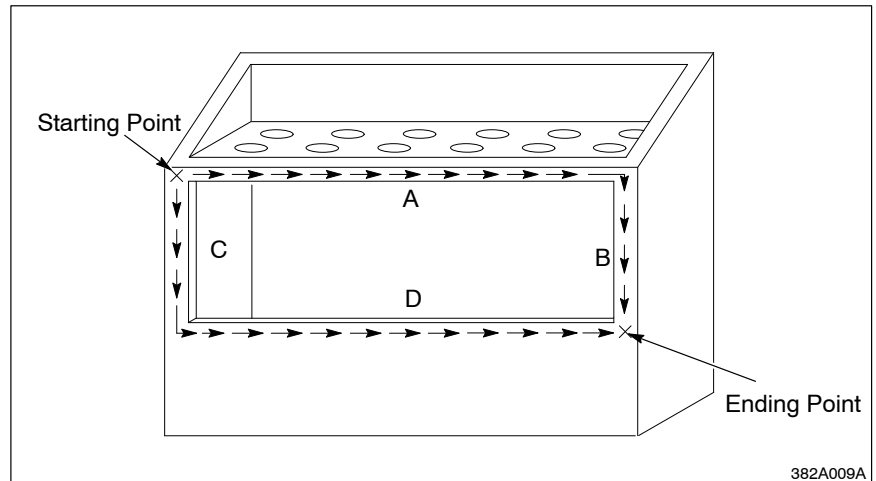


Fig. 10 D-gasket installation

Positive Stop Installation

The positive stop prevents over-compression of the D-gasket when you clamp the color module to the booth-base inlet frame. Over-compression will damage the gasket and allow leaks.

See Figure 11 for color modules used with organic powders. See Figure 12 for color modules used with frit (porcelain enamel) powders.

1. Mark drill points for the stops as shown in the lower left and right corners of the color module mouth (6).

NOTE: Make sure the holes you drill will be accessible from inside and outside the module and will not interfere with the D-gasket (7). You can vertically adjust the drill points for the frit module (Figure 12). Do not change the 38-mm (1.5-in.) horizontal measurement.

Positive Stop Installation

(contd.)

2. Place a piece of heavy paper or cardboard inside the module to catch metal shavings. Drill $\frac{1}{2}$ -in. holes at the marks you made in step 1. Do not allow metal shavings to contaminate the powder in the color module hoppers.
3. Apply RTV caulking compound (3) to the $\frac{1}{2}$ -13 x 1.75-in. screw (1) heads or $\frac{1}{2}$ -in. flat washers (2).
4. Install the screws, flat washers, $\frac{1}{2}$ -in. lock washers (4), and $\frac{1}{2}$ -in. nuts (5). If you install two flat washers, the D-gasket will compress 6 mm ($\frac{1}{4}$ in.) when the color module is clamped to the inlet frame. If you install no flat washers, the D-gasket will compress 13 mm ($\frac{1}{2}$ in.).

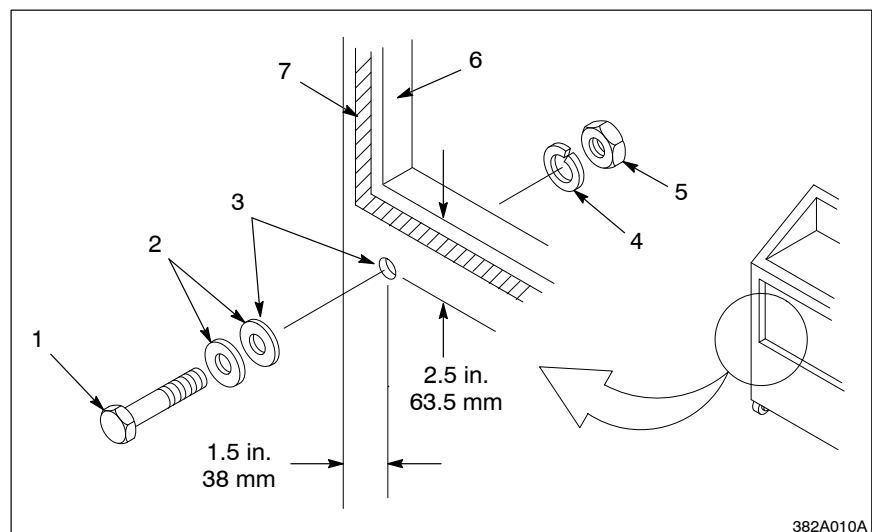


Fig. 11 Positive stop installation—organic powder color module

- | | |
|-----------------|-----------------------|
| 1. Screws | 5. Nuts |
| 2. Flat washers | 6. Color module mouth |
| 3. RTV caulk | 7. D-gasket |
| 4. Lock washers | |

Positive Stop Installation

(contd.)

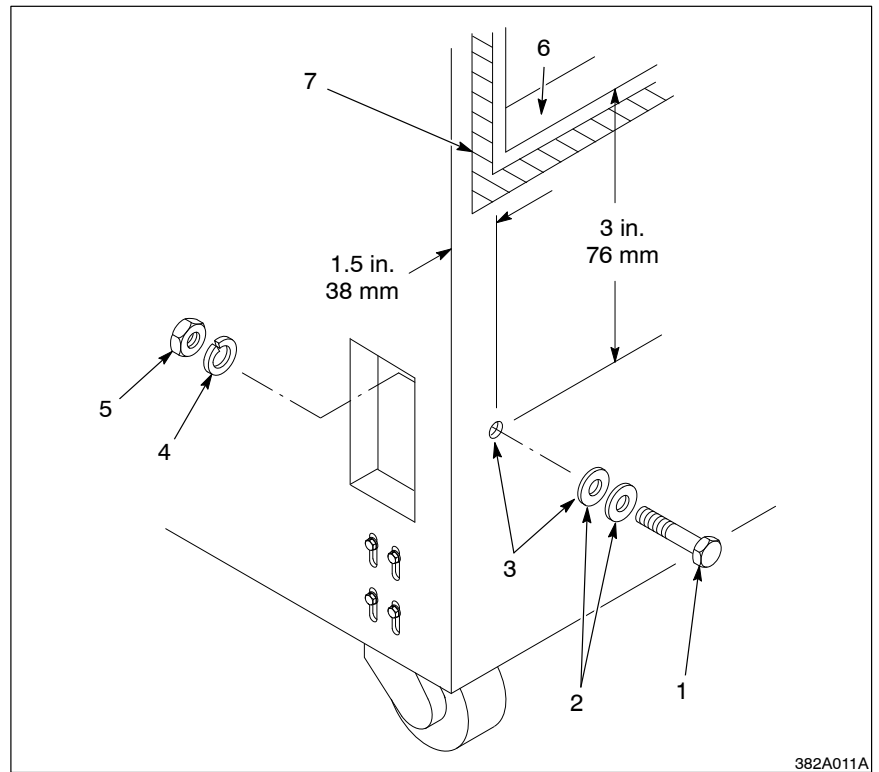


Fig. 12 Positive stop installation—frit powder color module

- | | |
|-----------------|-----------------------|
| 1. Screws | 5. Nuts |
| 2. Flat washers | 6. Color module mouth |
| 3. RTV caulk | 7. D-gasket |
| 4. Lock washers | |

Center-Mount Cartridge Filter Installation

Use the center mounts only with center-mount cartridge filters. The kits do not include cartridge filters. Refer to the *Parts* section for cartridge filter part numbers.

Recommended Order of Installation

Install the back row of filters first, working from the ends of the color module toward the middle. Figure 13 shows the recommended order of installation for 512, 518, and 524 color modules.

You can also use the optional filter platform listed in the *Parts* section to help you install the two back rows of cartridge filters in the 518 and 524 booths. The platform rests on the angled sides of the hoppers inside the color module. Remove the platform after installing the two back rows of filters.

Center-Mount Cartridge Filter Installation (contd.)

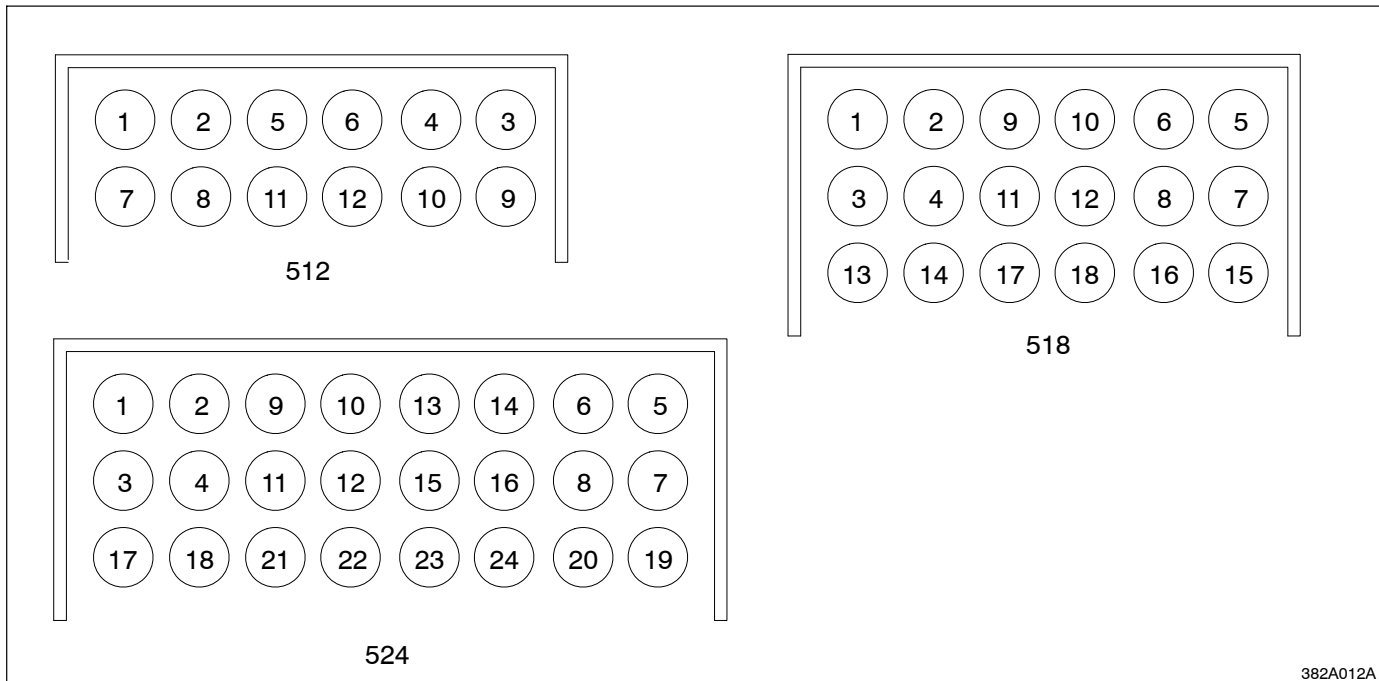


Fig. 13 Recommended cartridge filter order of installation

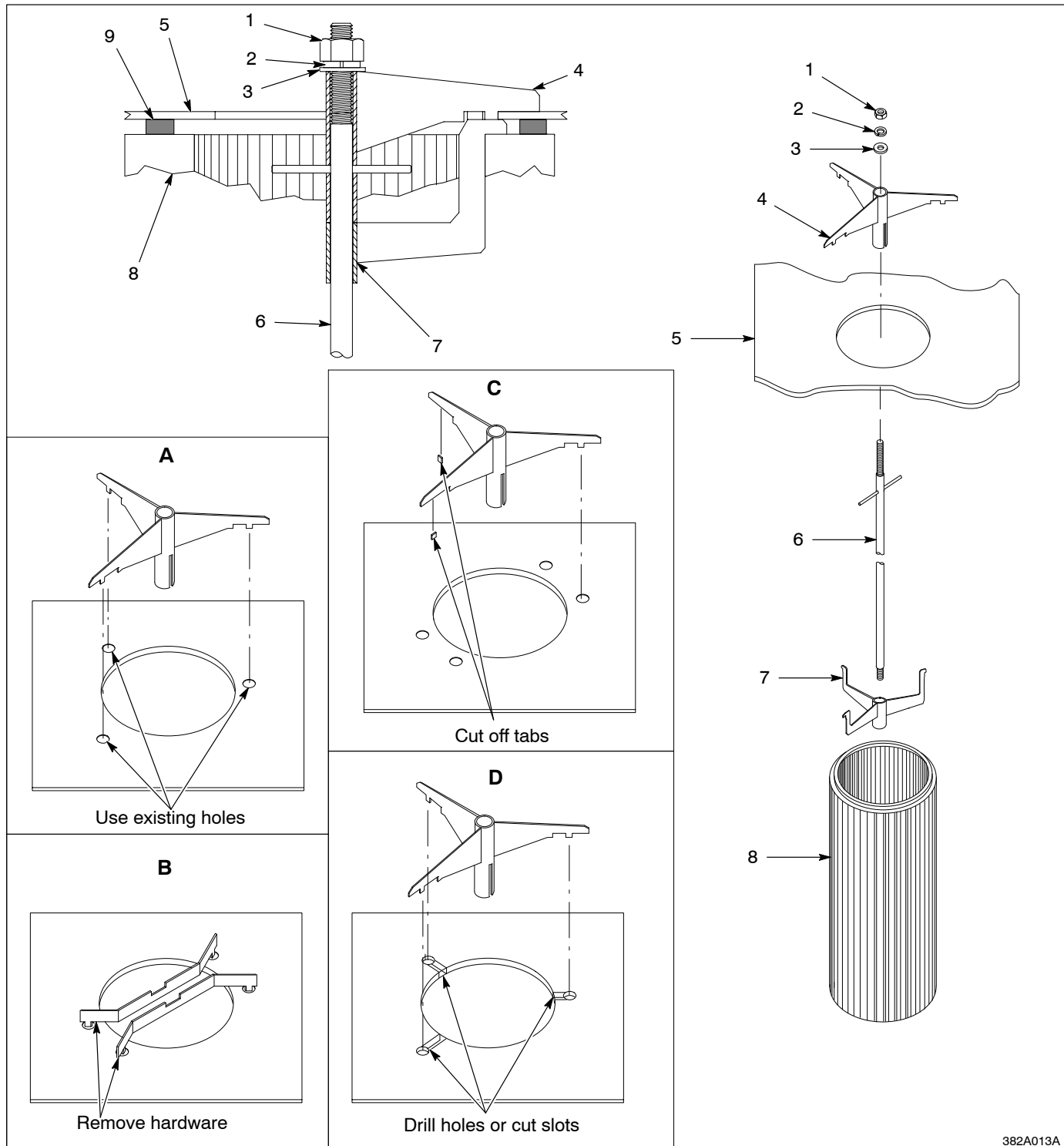
Installation

1. Remove the old cartridge filters and all mounting hardware from the color module.
2. See Figure 14. Prepare the tube sheet for the supports (4):
 - a. If your color module used bolt-on 26-in. cartridge filters with three bolt holes, you do not have to modify the tube sheet. The support tabs will fit into the bolt holes (view A).
 - b. If your color module used hanger mounts (view B) with a crank handle at the bottom of the cartridge, you will have to modify either the tube sheet or supports. Remove the mounting hardware, then make one of the following modifications:
 - Cut off the tabs on two of the support arms and fit the remaining tab into one of the bolt holes (view C), or
 - Cut radial slots or drill holes in the tube sheet to match the support arm tabs (view D).

**Center-Mount Cartridge Filter
Installation** *(contd.)*

3. Thoroughly clean the sealing surfaces on the underside of the tube sheet (5). Dirty surfaces will allow powder to leak into the fan section.
4. Insert the threaded ends of the draw rods (6) through the centering brackets (7).
5. Remove the new cartridge filters (8) from their packaging and inspect them for damage. Do not use cartridges with damaged gaskets (9) or filter media.
6. Install the draw rods and centering brackets into the new cartridge filters. Thread the draw rods into the bosses in the bottom of the filters and hand-tighten.
7. Center the cartridge filters under the filter openings in the tube sheet. Use the T-handles on the draw rods to pull the cartridge filters up against the tube sheet.
8. Install the supports on the draw rods, making sure the slots in the support tubes fit over the T-handles.
9. Install the flat washers (3), lock washers (2), and nuts (1) on the draw rods.
10. Slip the support tabs into the holes you drilled around the filter openings.
11. Tighten the nuts until the supports and centering brackets are touching. Do not over tighten the nuts, or you may damage the cartridge filters.

Center-Mount Cartridge Filter Installation (contd.)



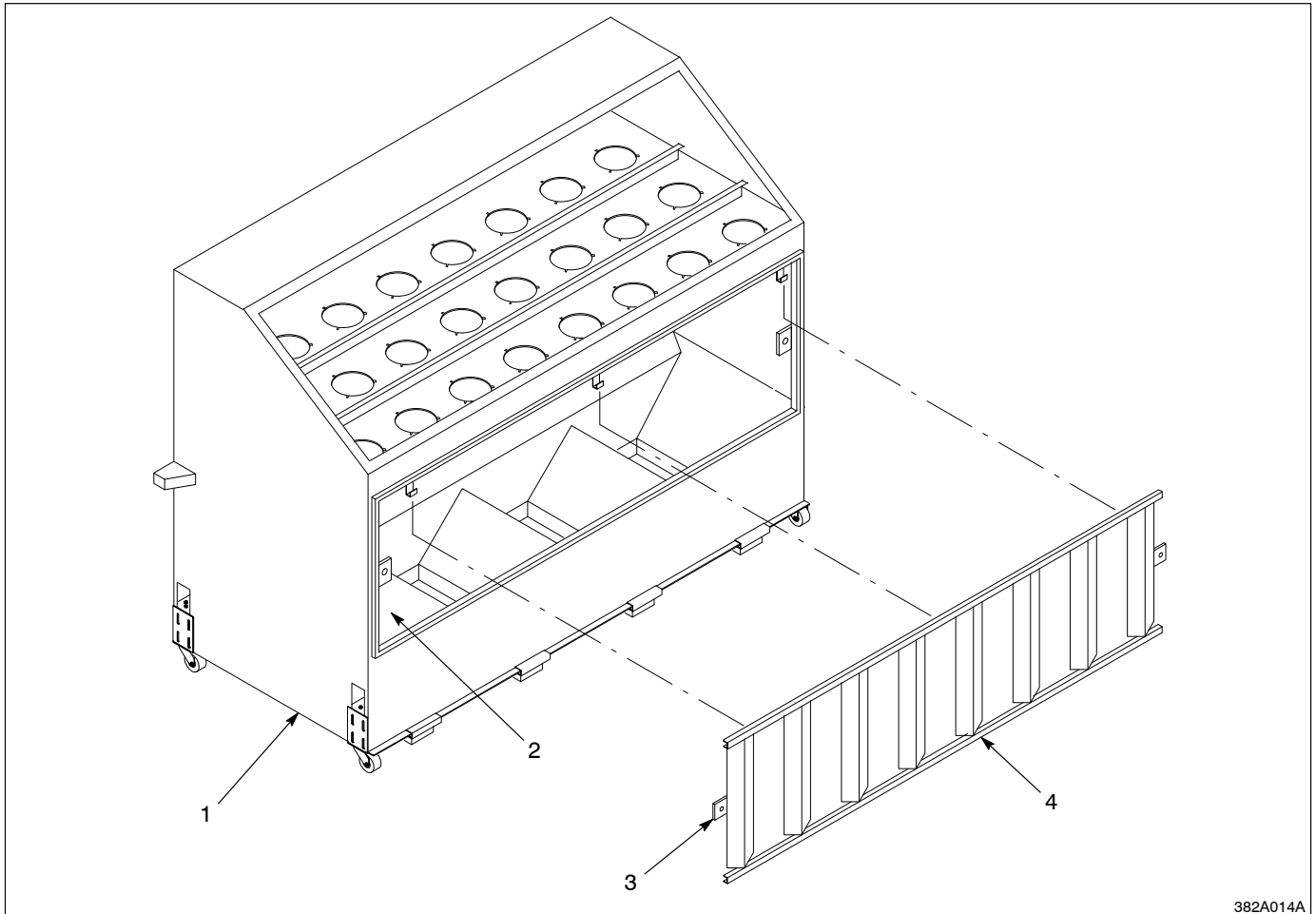
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Fig. 14 Center-mount cartridge filter installation

- | | | |
|----------------|---------------|----------------------|
| 1. Nut | 4. Support | 7. Centering bracket |
| 2. Lock washer | 5. Tube sheet | 8. Cartridge filter |
| 3. Flat washer | 6. Draw rod | 9. Gasket |

Baffle Installation

See Figure 15. Hang the new baffle (4) on the existing brackets inside the color module mouth as shown. Be sure the tabs (3) match the tab stops (2). If not, remove the baffle, turn it over, and reinstall it. The tabs prevent the baffle from being pulled into the cartridge filters during booth operation. New tab stops will be provided on request.



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Fig. 15 Baffle installation

- 1. Color module
- 2. Tab stops

- 3. Tabs
- 4. Baffle

4. Final Filter Kit Installation

These kits include new housings, filters, brackets, and fasteners.



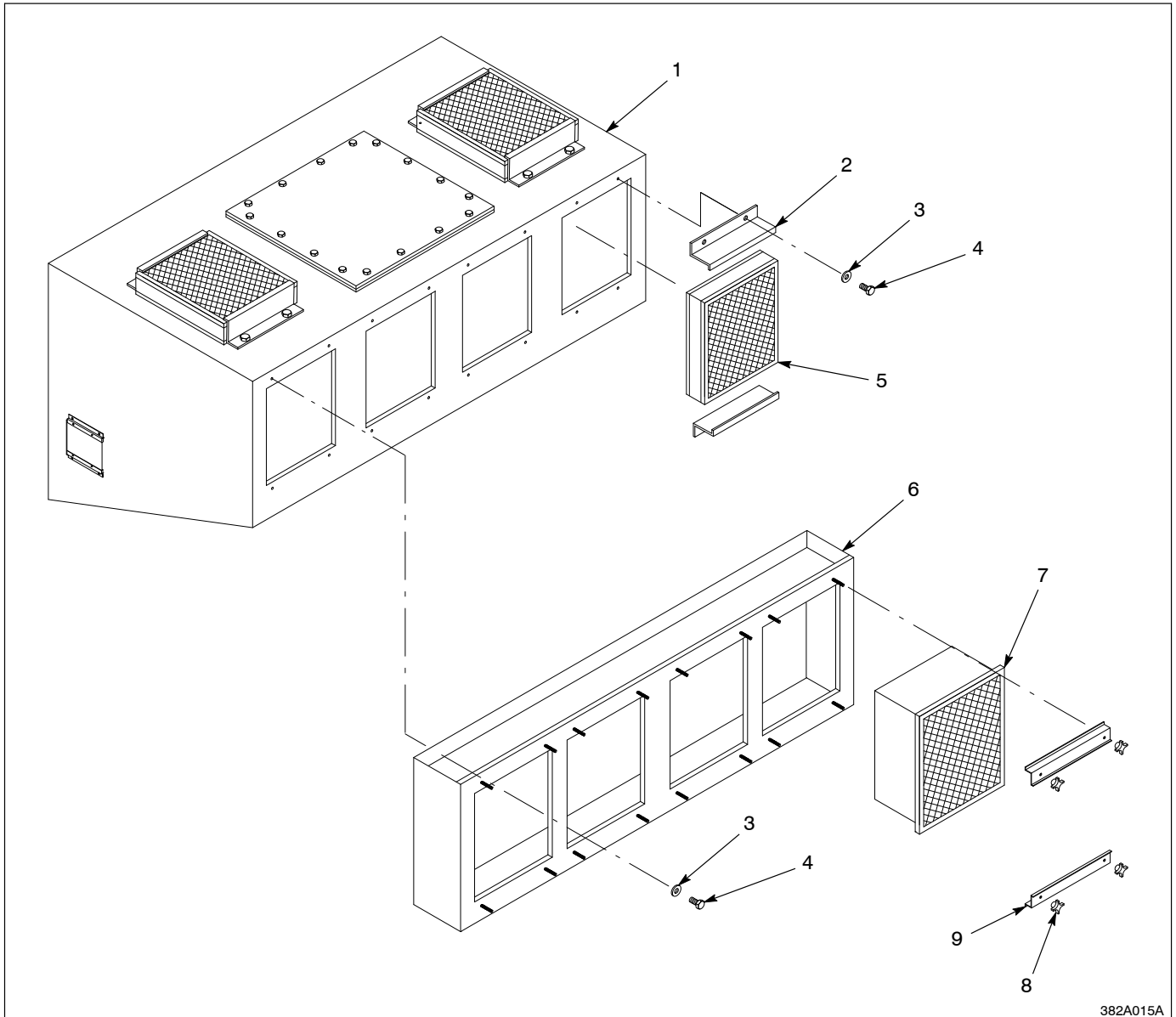
WARNING: Before performing these procedures shut off the system electrical power. Lockout and tag the disconnect switch.

Front-Mounted Final Filter Kits

This procedure applies to the front-mounted final filter kits for all fan sections.

1. See Figure 16. Remove the screws (4), washers (3), brackets (2) and final filters (5) from the fan section (1). Save the screws and washers for reuse.
2. Clean the front of the fan section thoroughly.
3. Apply a 6–13-mm ($1/4$ – $1/2$ -in.) thick bead of RTV caulking compound around the circumference of the rear opening in the new housing (6), about 25 mm (1 in.) from the edge.
4. Use a tested, approved lifting device or forklift to lift the new housing up to the front of the fan section. Line up the holes in the housing with the tapped holes in the fan section.
5. Secure the new housing to the fan section with the screws and washers you removed in step 1.
6. Install the new final filters (7) in the housing and secure them with the new brackets (9) and threaded knobs (8).

Front-Mounted Final Filter Kits (contd.)



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Fig. 16 Installing front-mounted final filter kits (512/518 shown)

- | | | |
|-------------------|------------------------|------------------------|
| 1. Fan section | 4. Screws | 7. Final filters (new) |
| 2. Brackets (old) | 5. Final filters (old) | 8. Knobs (new) |
| 3. Washers | 6. Housing (new) | 9. Brackets (new) |

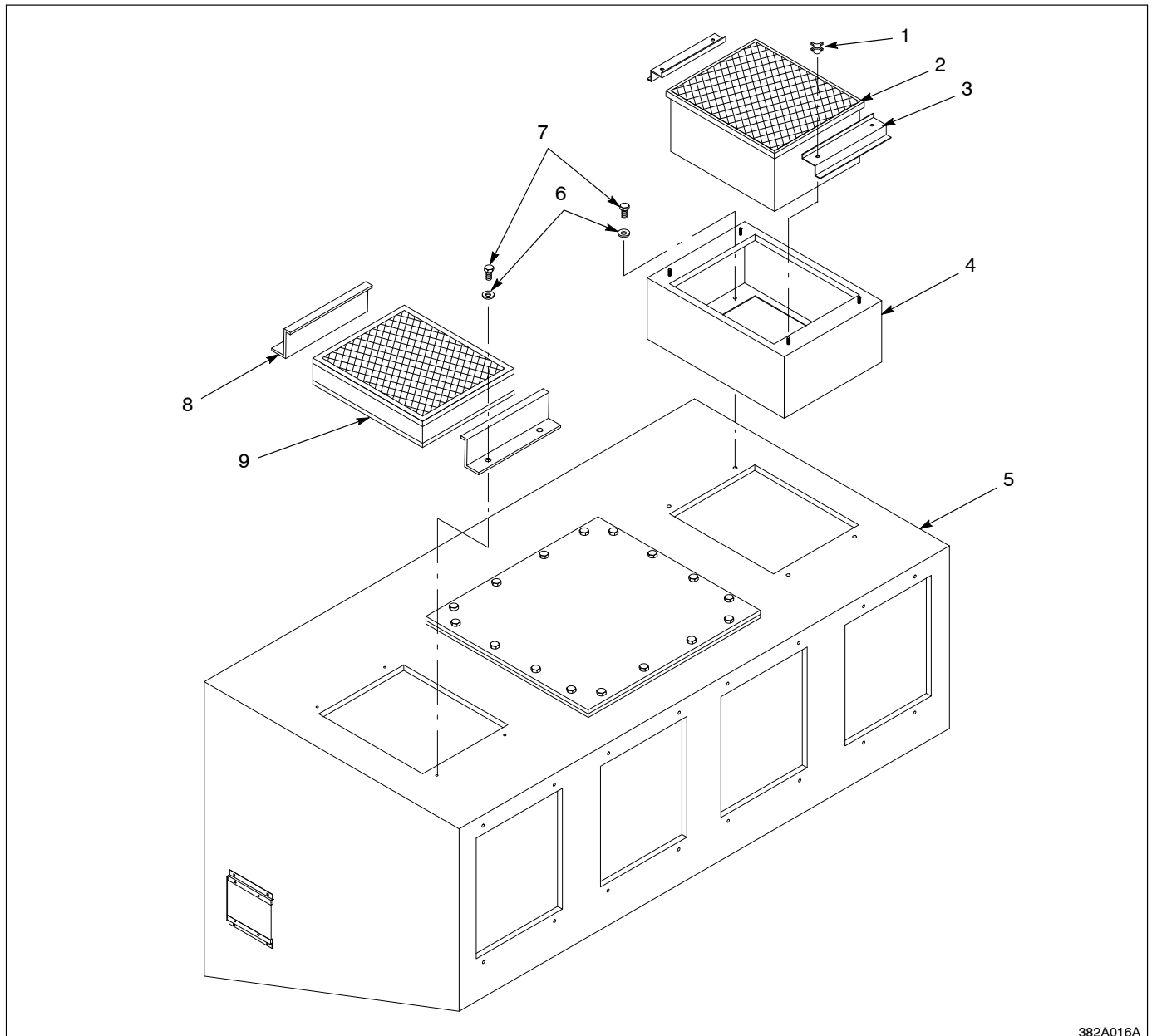
Top-Mounted Final Filter Kits

This procedure applies to the top-mounted final filter kits for the 518 and 524 fan sections.

1. See Figure 17. Remove the screws (7), washers (6), brackets (8), and final filters (9) from the fan section. Save the screws and washers for reuse.
2. Clean the area around the filter openings thoroughly.
3. Apply a 6–13-mm ($1/4$ – $1/2$ -in.) thick bead of RTV caulking compound around the circumference of the bottom openings in the new housings (4), about 25 mm (1 in.) in from the edge.
4. Line up the holes in the housings with the tapped holes in the fan section (5).
5. Secure the housings to the fan section with the screws and washers you removed in step 1.
6. Install the new final filters (2) in the housings and secure them with the new brackets (3) and threaded knobs (1).

Top-Mounted Final Filter Kits

(contd.)



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Fig. 17 Installing the top-mounted final filter kit

- 1. Knobs (new)
- 2. Final filters (new)
- 3. Brackets (new)

- 4. Housings (new)
- 5. Fan section
- 6. Washers

- 7. Screws
- 8. Brackets (old)
- 9. Final filters (old)

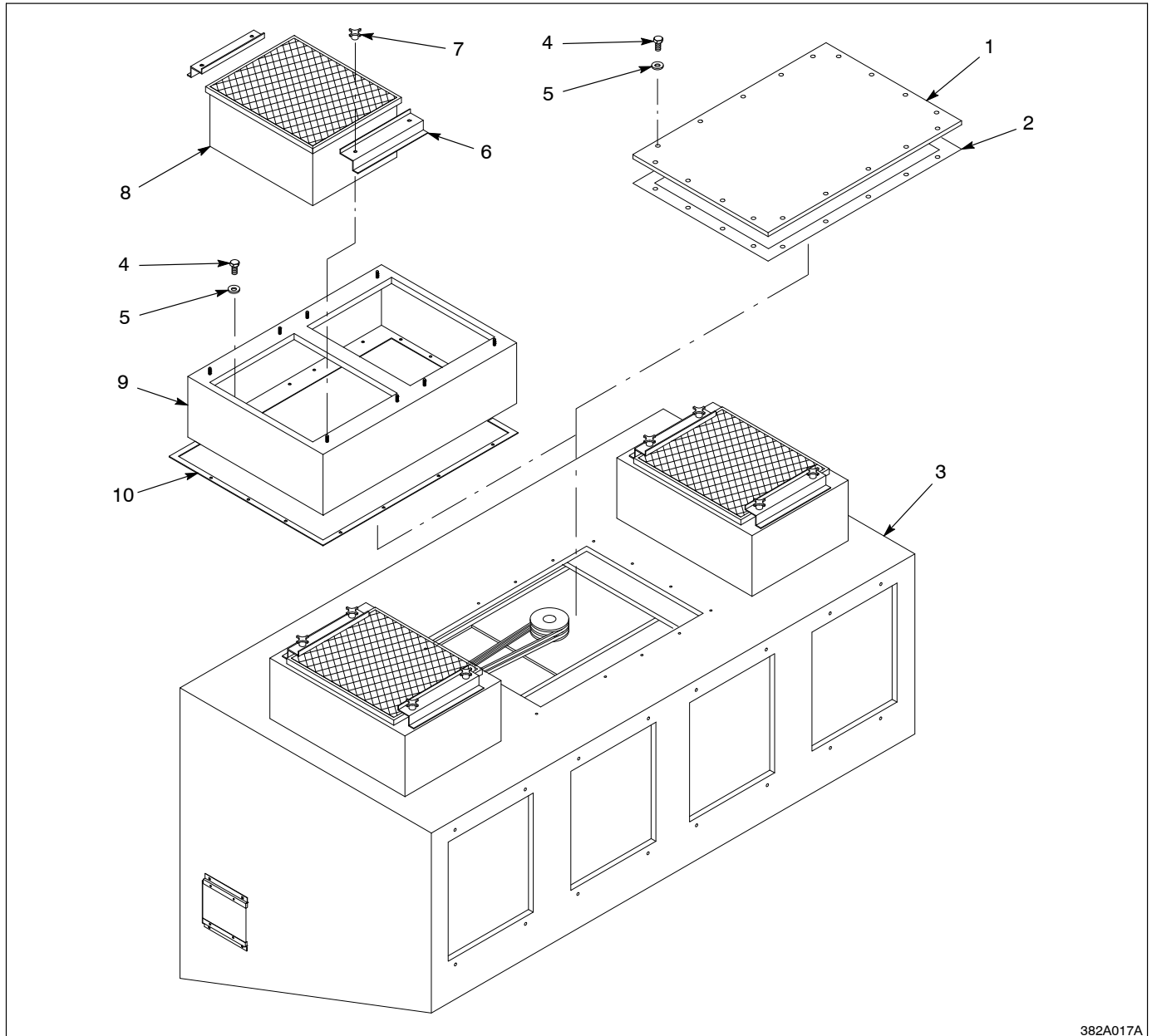
Motor-Cover Final Filter Kits

This procedure applies to the motor-cover final filter kits for all fan sections.

1. See Figure 18. Remove the screws (4), washers (5), motor cover (1) and gasket (2) from the fan section (3). Save the screws and washers for reuse.
2. Clean the area around the opening thoroughly.
3. Line up the holes in the new gasket (10) and the housing (9) with the tapped holes around the opening.
4. Secure the housing to the fan section with the screws and washers you removed in step 1.
5. Install the final filters (8) in the housing and secure them with the brackets (6) and threaded knobs (7).

Motor-Cover Final Filter Kits

(contd.)



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Fig. 18 Installing motor cover-mounted final filter kits (512/518 shown)

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|----------------------|-------------------|------------------------|
| 1. Motor cover (old) | 5. Washers | 8. Final filters (new) |
| 2. Gasket (old) | 6. Brackets (new) | 9. Housing (new) |
| 3. Fan section | 7. Knobs (new) | 10. Gasket (new) |
| 4. Screws | | |

5. Parts

Refer to *Kit Selection* before ordering kits for your booths, or replacement parts for previously installed kits.

Kit Selection

Tables 3 and 4 list the fan section, color module, and final filter kits. Select fan section and color module kits for your booth based on the following criteria:

- Number of cartridges (determines model number)
- Type of fan section and color module: rectangular or wedge
- Height of the color module mouth: 609- or 762-mm (24- or 30-in.) high
- Type of powder: organic or porcelain enamel (frit)

NOTE: The kits do not include cartridge filters. Refer to the cartridge filter list in this section for part numbers.

Table 3 Fan Section and Color Module Kit Selection

Color Module Model	Fan Section Model	No. of Cartridge Filters	Fan Section Color Module Type	Color Module Mouth Height mm (inches)	Fan Section Kit	Color Module Kit (Organic)	Color Module Kit (Frit)
504T	504	4	Wedge	609 (24)	154 242	154 244	—
504	504	4	Wedge	762 (30)	154 242	154 243	—
512T	512T	12	Rectangular	609 (24)	154 248	154 249	—
512T	512	12	Wedge	609 (24)	154 245	154 249	—
512	512	12	Wedge	762 (30)	154 245	154 246	154 247
516T	516T	16	Rectangular	609 (24)	154 252	154 253	—
516T	516	16	Wedge	609 (24)	154 250	154 253	—
516	516	16	Wedge	762 (30)	154 250	154 251	—
518	518	18	Wedge	762 (30)	154 254	154 255	154 256
524	524	24	Wedge	762 (30)	154 257	154 258	154 259

Table 4 Final Filter Kits

No. of Cartridge Filters	Model	Front Mounted Kit	Top Mounted Kit	Motor Cover Kit (Optional)
12	512, 512T	165 720	Not available	165 718
16	516, 516T	165 721	Not available	165 717
18	518	165 720	165 719	165 718
24	524	165 721	165 719	165 717

Fan Section Kit Parts

For information on which kits to use with your booth, refer to *Kit Selection* in this section.

Part	Description	Quantity	Note
154 242	Kit, fan section, enhancement, 504, 32/36 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	4	
165 726	• Nozzle, cartridge, pulse	4	
902 504	• Tape, PTFE	1	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	4	
154 234	Seal, wedge, D-style, 504	1	A
900 497	Adhesive, neoprene, contact	1	A
NOTE A: These parts are not included in the enhancement kit. Order separately if required.			

Part	Description	Quantity	Note
154 245	Kit, fan section, enhancement, 512, 36 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	12	
165 726	• Nozzle, cartridge, pulse	12	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	12	
154 225	Seal wedge, D-style, 512	1	A
900 497	Adhesive, neoprene, contact	1	A
NOTE A: These parts are not included in the enhancement kit. Order separately if required.			

Fan Section Kit Parts (contd.)

Part	Description	Quantity	Note
154 248	Kit, fan section, 512T, 32 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	12	
165 726	• Nozzle, cartridge, pulse	12	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	12	
154 238	• Manifold, pulse, 512T	1	
176 471	• Board, timer, 20 output, w/enclosure	1	
176 299	• Enclosure, pulse valve, (12)	1	
900 534	• Tubing, polyethylene, 1/4 in. OD	70 ft	
154 225	Seal wedge, D-style, 512	1	A
900 497	Adhesive, neoprene, contact	1	A

NOTE A: These parts are not included in the enhancement kit. Order separately if required.

Part	Description	Quantity	Note
154 250	Kit, fan section, 516, 36 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	16	
165 726	• Nozzle, cartridge, pulse	16	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	16	
154 226	Seal wedge, D-style, 516	1	A
900 497	Adhesive, neoprene, contact	1	A

NOTE A: These parts are not included in the enhancement kit. Order separately if required.

Fan Section Kit Parts (contd.)

Part	Description	Quantity	Note
154 252	Kit, fan section, 516T, 32 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	16	
165 726	• Nozzle, cartridge, pulse	16	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	16	
154 239	• Manifold, pulse, 516T	1	
176 471	• Board, timer, 20 output, w/enclosure	1	
154 282	• Enclosure, pulse valve (8)	2	
900 534	• Tubing, polyethylene, 1/4 in. OD	80 ft	
154 226	Seal wedge, D-style, 516	1	A
900 497	Adhesive, neoprene, contact	1	A
NOTE A: These parts are not included in the enhancement kit. Order separately if required.			

Part	Description	Quantity	Note
154 254	Kit, fan section, 518, 36 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	18	
165 726	• Nozzle, cartridge, pulse	18	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	18	
176 289	• Board, timer, 20 output	1	
154 225	Seal wedge, D-style, 518	1	A
900 497	Adhesive, neoprene, contact	1	A
NOTE A: These parts are not included in the enhancement kit. Order separately if required.			

Fan Section Kit Parts (contd.)

Part	Description	Quantity	Note
154 257	Kit, fan section, 524, 36 in. cartridges	1	
174 710	• Valve, pulse, 1 in. NPT input, 1 in. NPT output	24	
165 726	• Nozzle, cartridge, pulse	24	
902 504	• Tape, PTFE	2	
972 119	• Elbow, male, 1/4 in. tube x 1/8 in. NPT	24	
248 934	• Board, timer, 32 output	1	
154 226	Seal wedge, D-style	1	A
900 497	Adhesive, neoprene, contact	1	A
NOTE A: These parts are not included in the enhancement kit. Order separately if required.			

Color Module Kits Parts

For information on which kits to use with your booth, refer to *Kit Selection* in this section.

Part	Description	Quantity
154 243	Module, collector, enhanced, 504, 36 in. cartridges	1
154 231	• Baffle, collector mouth, 504	1
154 233	• Seal, mouth, D-style, 504	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	4
174 722	• Bracket, centering, filter	4
984 178	• Nut, hex, 5/8-1 UNC-2B	4
983 440	• Washer, lock, 5/8 in.	4
983 090	• Washer, flat, 5/8 in.	4
174 723	• Rod, filter mount, 36 in.	4
981 610	• Screw, hex head, 1/2-13 x 1 3/4 in.	2
983 007	• Washer, flat, 1/2 in.	4
983 180	• Washer, lock, 1/2 in.	2
984 170	• Nut, hex, 1/2-13	2

Color Module Kits Parts (contd.)

Part	Description	Quantity
154 244	Module, collector, enhanced, 504T, 32 in. cartridges	1
154 228	• Baffle, collector mouth, 504T	1
154 235	• Seal, mouth, D-style, 504T	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	4
174 722	• Bracket, centering, filter	4
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	4
983 440	• Washer, lock, $\frac{5}{8}$ in.	4
983 090	• Washer, flat, $\frac{5}{8}$ in.	4
176 278	• Rod, filter mount, 32 in.	4
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Part	Description	Quantity
154 246	Module, collector, enhanced, 512, 36 in. cartridges	1
174 725	• Baffle, collector mouth, 512	1
154 224	• Seal, mouth, D-style, 512	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	12
174 722	• Bracket, centering, filter	12
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	12
983 440	• Washer, lock, $\frac{5}{8}$ in.	12
983 090	• Washer, flat, $\frac{5}{8}$ in.	12
174 723	• Rod, filter mount, 36 in.	12
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Color Module Kits Parts (contd.)

Part	Description	Quantity
154 247	Module, collector, frit, 512, 36 in. cartridges	1
174 730	• Baffle, collector mouth, frit, 512/518	1
154 224	• Seal, mouth, D-style, 512	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	12
174 722	• Bracket, centering, filter	12
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	12
983 440	• Washer, lock, $\frac{5}{8}$ in.	12
983 090	• Washer, flat, $\frac{5}{8}$ in.	12
174 723	• Rod, filter mount, 36 in.	12
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Part	Description	Quantity
154 249	Module, collector, enhanced, 512T, 32 in. cartridges	1
154 229	• Baffle, collector mouth, 512T	1
154 236	• Seal, mouth, D-style, 512T	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	12
174 722	• Bracket, centering, filter	12
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	12
983 440	• Washer, lock, $\frac{5}{8}$ in.	12
983 090	• Washer, flat, $\frac{5}{8}$ in.	12
176 278	• Rod, filter mount, 32 in.	12
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Color Module Kits Parts (contd.)

Part	Description	Quantity
154 251	Module, collector, enhanced, 516, 36 in. cartridges	1
174 729	• Baffle, collector mouth, 516	1
154 227	• Seal, mouth, D-style, 516	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	16
174 722	• Bracket, centering, filter	16
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	16
983 440	• Washer, lock, $\frac{5}{8}$ in.	16
983 090	• Washer, flat, $\frac{5}{8}$ in.	16
174 723	• Rod, filter mount, 36 in.	16
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Part	Description	Quantity
154 253	Module, collector, enhanced, 516T, 32 in. cartridges	1
154 230	• Baffle, collector mouth, 516T	1
154 237	• Seal, mouth, D-style, 516T	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	16
174 722	• Bracket, centering, filter	16
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	16
983 440	• Washer, lock, $\frac{5}{8}$ in.	16
983 090	• Washer, flat, $\frac{5}{8}$ in.	16
176 278	• Rod, filter mount, 32 in.	16
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Color Module Kits Parts (contd.)

Part	Description	Quantity
154 255	Module, collector, enhanced, 518, 36 in. cartridges	1
174 725	• Baffle, collector mouth, 512/518	1
154 224	• Seal, mouth, D-style, 512/518	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	18
174 722	• Bracket, centering, filter	18
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	18
983 440	• Washer, lock, $\frac{5}{8}$ in.	18
983 090	• Washer, flat, $\frac{5}{8}$ in.	18
174 723	• Rod, filter mount, 36 in.	18
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Part	Description	Quantity
154 256	Module, collector, frit, 518, 36 in. cartridges	1
174 730	• Baffle, collector mouth, frit, 512/518	1
154 224	• Seal, mouth, D-style, 512/518	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	18
174 722	• Bracket, centering, filter	18
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	18
983 440	• Washer, lock, $\frac{5}{8}$ in.	18
983 090	• Washer, flat, $\frac{5}{8}$ in.	18
174 723	• Rod, filter mount, 36 in.	18
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Color Module Kits Parts (contd.)

Part	Description	Quantity
154 258	Module, collector, enhanced, 524, 36 in. cartridges	1
174 729	• Baffle, collector mouth, 524	1
154 227	• Seal, mouth, D-style, 524	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	24
174 722	• Bracket, centering, filter	24
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	24
983 440	• Washer, lock, $\frac{5}{8}$ in.	24
983 090	• Washer, flat, $\frac{5}{8}$ in.	24
174 723	• Rod, filter mount, 36 in.	24
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Part	Description	Quantity
154 259	Module, collector, frit, 524, 36 in. cartridges	1
176 272	• Baffle, collector mouth, frit, 524	1
154 227	• Seal, mouth, D-style, 524	1
900 497	• Adhesive, neoprene, contact	1
179 215	• Support, filter mount, 500 Series	24
174 722	• Bracket, centering, filter	24
984 178	• Nut, hex, $\frac{5}{8}$ -11 UNC-2B	24
983 440	• Washer, lock, $\frac{5}{8}$ in.	24
983 090	• Washer, flat, $\frac{5}{8}$ in.	24
174 723	• Rod, filter mount, 36 in.	24
981 610	• Screw, hex head, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ in.	2
983 007	• Washer, flat, $\frac{1}{2}$ in.	4
983 180	• Washer, lock, $\frac{1}{2}$ in.	2
984 170	• Nut, hex, $\frac{1}{2}$ -13	2

Final Filter Kits

For information on which kits to use with your booth, refer to *Kit Selection* in this section.

Part	Description	Quantity
165 717	Kit, retrofit, deep finals (516, 524 motor cover)	1
156 995	• Filter, final, 20 x 24 in., internal	2
176 367	• Knob, final filter clamp, Excel	8
176 366	• Clamp, final filter	4
981 540	• Screw, hex head, $\frac{3}{8}$ -16 x 3 in., cap	8
-----	• Plate, motor access, 516/524	1
897 090	• Gasket, neoprene, $\frac{1}{4}$ x 1 in.	AR
AR: As Required		

Part	Description	Quantity
165 718	Kit, retrofit, deep finals (512, 518 motor cover)	1
156 995	• Filter, final, 20 x 24 in., internal	2
176 367	• Knob, final filter clamp, Excel	8
176 366	• Clamp, final filter	4
981 540	• Screw, hex head, $\frac{3}{8}$ -16 x 3 in., cap	8
-----	• Plate, motor access, 512/518	1
897 090	• Gasket, neoprene, $\frac{1}{4}$ x 1 in.	AR
AR: As Required		

Part	Description	Quantity
165 719	Kit, retrofit, deep finals (518, 524 top mounting)	1
156 995	• Filter, final, 20 x 24 in., internal	2
176 367	• Knob, final filter clamp, Excel	8
176 366	• Clamp, final filter	4
981 540	• Screw, hex head, $\frac{3}{8}$ -16 x 3 in., cap	8
-----	• Housing, final filter, top	2
900 401	• Sealant, RTV, clear, 12 oz tube	1

Final Filter Kits (contd.)

Part	Description	Quantity
165 720	Kit, retrofit, deep finals (512, 518 front mounting)	1
156 995	• Filter, final, 20 x 24 in., internal	4
176 367	• Knob, final filter clamp, Excel	16
176 366	• Clamp, final filter	8
981 540	• Screw, hex head, $\frac{3}{8}$ -16 x 3 in., cap	16
- - - - -	• Housing, final filter, 512/518	1
900 401	• Sealant, RTV, clear, 12 oz tube	1

Part	Description	Quantity
165 721	Kit, retrofit, deep finals (516, 524 front mounting)	1
156 995	• Filter, final, 20 x 24 in., internal	6
176 367	• Knob, final filter clamp, Excel	24
176 366	• Clamp, final filter	12
981 540	• Screw, hex head, $\frac{3}{8}$ -16 x 3 in., cap	24
- - - - -	• Housing, final filter, 516/524	1
900 401	• Sealant, RTV, clear, 12 oz tube	4

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