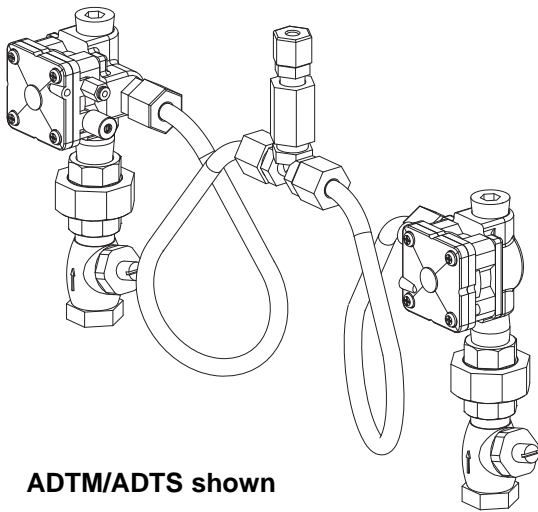


Installation

ASTM, ADTM, ASTS, ADTS

Air Valve Manifold Assembly



ADTM/ADTS shown

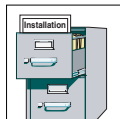
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S45-1303	ADTM
S45-1303A	ADTS
S45-1304	ADTM NFC
S45-1304A	ADTS NFC
S45-1305	ASTM
S45-1305A	ASTS
S45-1306	ASTM NFC
S45-1306A	ASTS NFC
S45-1307	ASTM-2
S45-1308	ADTM-2
S45-1309	ADTM-3
S45-1310	ADTM-4
S45-2257	ASTM (Showers)



IMPORTANT



Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department. Compliance and conformity to local codes and ordinances is the responsibility of the installer.



Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Product warranties may be found under "Product Information" on our web site at www.bradleycorp.com.

Installation

Supplies required:

- Mounting hardware and supply piping
- Pipe sealant

Step 1: Make connections to manifold air valve

Complete the procedure below for each fixture that is to be connected to the manifold assembly.

⚠ IMPORTANT: The tube ends must be square and without burrs to ensure a tight seal. If necessary to cut tubing to the appropriate length, use a sharp razor blade (see *Tubing Connections*, page 6 before installing tubing).

1. Insert one end of the red nylon tube completely into the hot water push button tube connector, and the other end into the air valve on the hot water supply side on manifold (Figure 1).

ASTM & ASTS: If you are supplying only hot or cold water to the fixture using valves ASTM or ASTS, insert one end of the nylon tube (provided) into the push button tube connector, and the other end into the air valve connector on manifold. *Continue to Procedure #3 below.*

2. Insert the blue nylon tube into the cold water push button tube connector. Make sure tube is inserted completely. Then insert the blue tube into the air valve connector on the cold water supply side on manifold.
3. Insert the tube into the tube connector on back of the filler. Make sure tube is inserted completely. Then screw the other end of the black tube to the manifold tube connector and tighten.

NOTE: Make sure that all the connections for one fixture are connected to the same manifold tube connector and air valves.

4. Mount manifold (optional mounting supplies by installer) and make connections (supplied by installer) from water supply to the stop valves 1/2" NPT female threads as needed.
5. Turn on water to the manifold, purge air from tubing, and check for leaks.

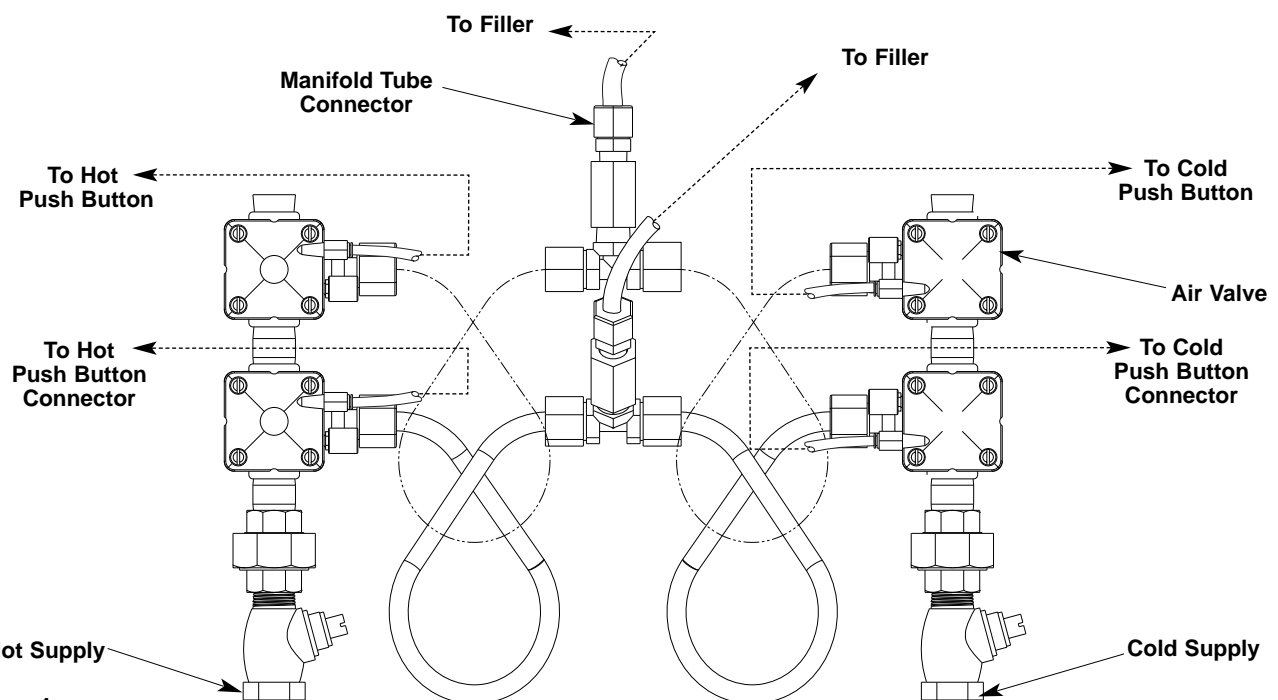


Figure 1

Installation

Step 2: Adjust air valve metering time

NOTE: Standard (metering) valve is shown in Figure 2a. For conversion to self-closing function, refer to Figure 2b.

The air valve timer is located next to the tube connector on the valve body. It is capped with a filter to prevent dirt build-up on the timer. The timing can be adjusted from 5–60 seconds. To adjust the time, remove the filter cap and use a screwdriver to turn the timer clockwise to increase time or counter-clockwise to decrease time. Once the desired time has been set, replace the filter cap.

Figure 2a

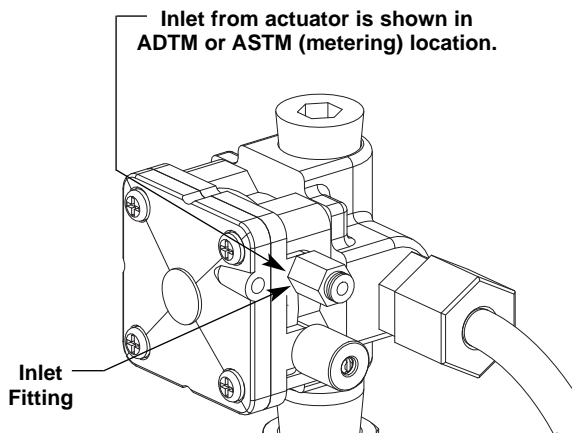
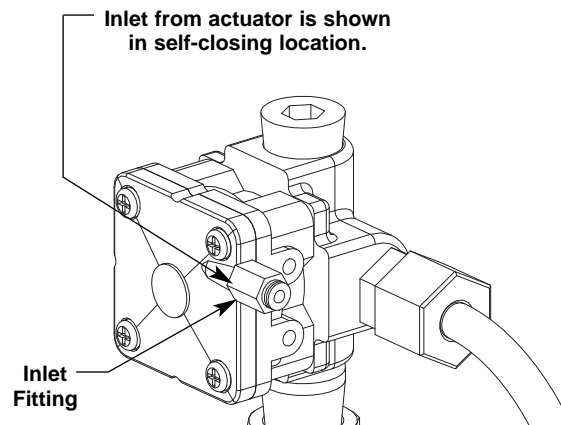


Figure 2b



Tubing Connections

The 1/8" tube fitting (Figure 3) and 1/4" male tube connector (Figure 4) for the air manifold assembly remain tight and leakproof when tubing is cut and installed properly. Follow the procedures below when installing the tubing to ensure that you achieve a leakproof seal.

1. Using a sharp razor blade, cut the tubing squarely and remove any burrs. **Do not** pinch or crush the end of the tubing.
2. Insert the tubing into the fitting or male connector. For 1/8" fitting, insert the end of the tubing into the fitting until it is firmly seated on the tube stop. For 1/4" male tube connector, loosen the nut on the fitting until three threads are exposed. Moisten the end of the tube, and push tube into fitting until it is firmly seated. Hand-tighten the nut to secure the tube to the fitting.

If fitting or connector leaks, reseal the tubing according to the procedure above. If leaking persists, replace the fitting or connector, or call your Bradley representative for assistance.

Figure 3

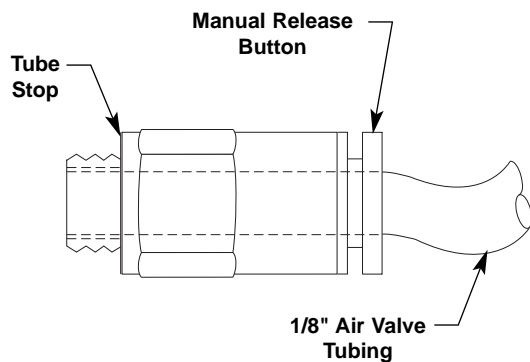
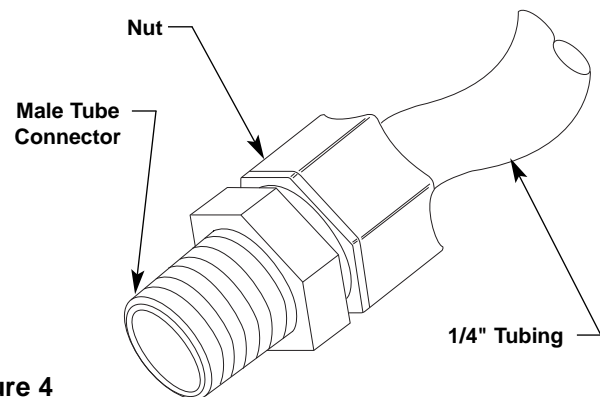


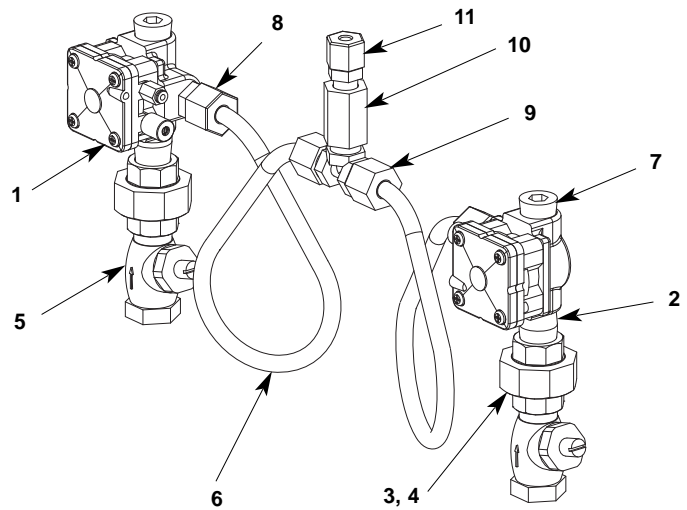
Figure 4



Manifold Service Parts

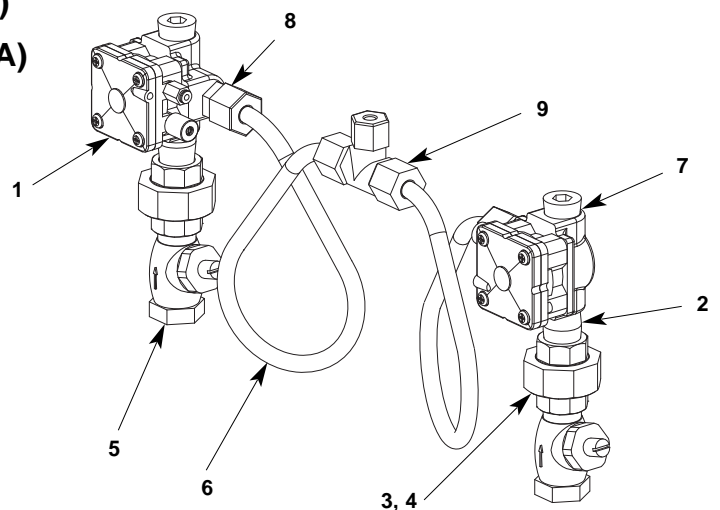
Manifold Assembly ADTM (S45-1303)
Manifold Assembly ADTS (S45-1303A)

PARTS LIST			
Item	Part No.	Description	QTY.
1	S07-058 (ADTM) S07-059 (ADTS)	Air Valve Assy.	2
2	113-006DH	1/2" Nipple	4
3	169-348	Union	2
4	269-475	Filter Washer	2
5	S27-102	Check Stop	2
6	R68-600014	3/8" Nylon Tubing	3 ft.
7	169-168	Pipe Plug	2
8	S60-006	Check Assy.	2
9	145-103	3/8" Male Tee	1
10	S88-057	Housing Assy.	1
11	145-098	Male Connector	1



Manifold Assembly ADTM NFC (S45-1304)
Manifold Assembly ADTS NFC (S45-1304A)

PARTS LIST			
Item	Part No.	Description	QTY.
1	S07-058 (ADTM) S07-059 (ADTS)	Air Valve Assy.	2
2	113-006DH	1/2" Nipple	4
3	169-348	Union	2
4	269-475	Filter Washer	2
5	S27-102	Check Stop	2
6	R68-600014	3/8" Nylon Tubing	3 ft.
7	169-168	Pipe Plug	2
8	S60-006	Check Assy.	2
9	145-197	Union Tee	1



Manifold Service Parts

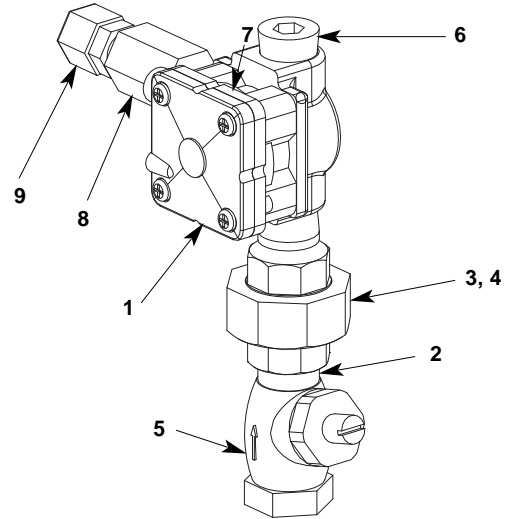
ASTM Showers

Manifold Assembly ASTM (S45-1305)

Manifold Assembly ASTS (S45-1305A)

PARTS LIST

Item	Part No.	Description	QTY.
1	S07-058 (ADTM) S07-059 (ASTS)	Air Valve Assy.	1
2	113-006DH	1/2" Nipple	2
3	169-348	Union	1
4	269-475	Filter Washer	1
5	S27-102	Check Stop	1
6	169-168	Pipe Plug	1
7	113-006AL	3/8" Close Nipple	1
8	S88-057	Housing Assy.	1
9	145-098	Male Connector	1

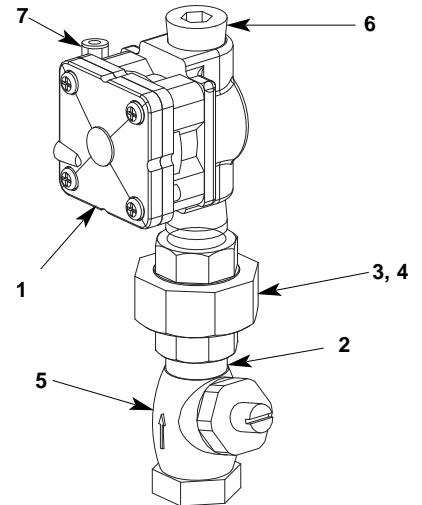


Manifold Assembly ASTM NFC (S45-1306)

Manifold Assembly ASTS NFC (S45-1306A)

PARTS LIST

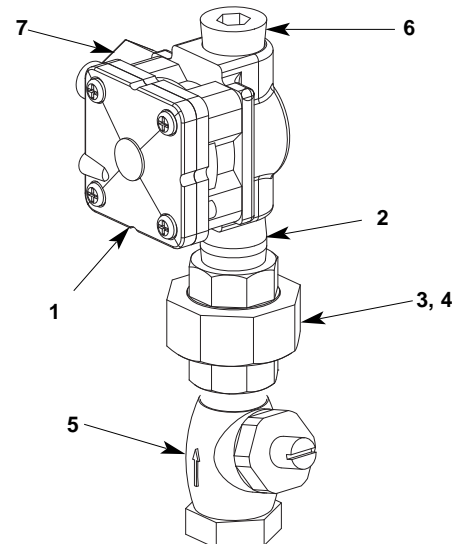
Item	Part No.	Description	QTY.
1	S07-058 (ADTM) S07-059 (ASTS)	Air Valve Assy.	1
2	113-006DH	1/2" Nipple	2
3	169-348	Union	1
4	269-475	Filter Washer	1
5	S27-102	Check Stop	1
6	169-168	Pipe Plug	1
7	269-701	Swivel Elbow	1



Manifold Assembly ASTM (S45-2257)

PARTS LIST

Item	Part No.	Description	QTY.
1	S07-058	Air Valve Assy.	1
2	113-006DH	1/2" Nipple	2
3	169-348	Union	1
4	269-475	Filter Washer	1
5	S27-102	Check Stop	1
6	169-168	Pipe Plug	1
7	145-075	3/8" Tube Connector	1

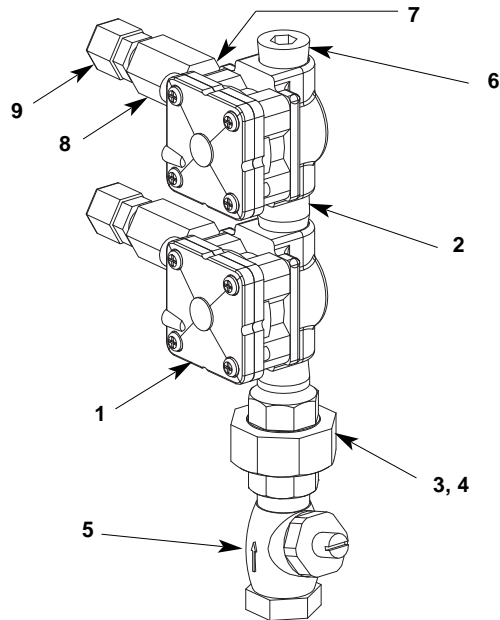


Manifold Service Parts

Manifold Assembly ASTM-2 (S45-1307)

PARTS LIST

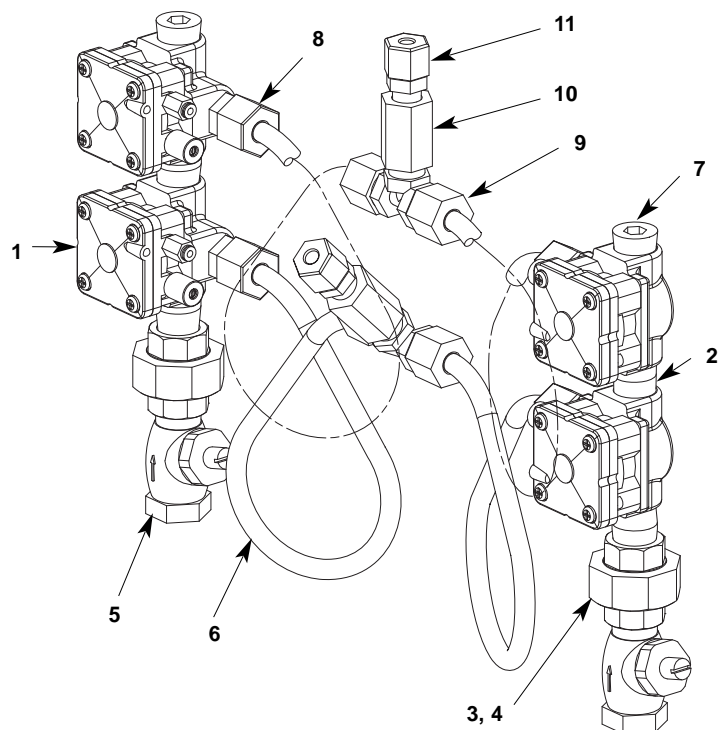
Item	Part No.	Description	QTY.
1	S07-058	Air Valve Assy.	2
2	113-006DH	1/2" Nipple	3
3	169-348	Union	1
4	269-475	Filter Washer	1
5	S27-102	Check Stop	1
6	169-168	Pipe Plug	1
7	113-006AL	3/8" Close Nipple	2
8	S88-057	Housing Assy.	2
9	145-098	Male Connector	2



Manifold Assembly ADTM-2 (S45-1308)

PARTS LIST

Item	Part No.	Description	QTY.
1	S07-058	Air Valve Assy.	4
2	113-006DH	1/2" Nipple	6
3	169-348	Union	2
4	269-475	Filter Washer	2
5	S27-102	Check Stop	2
6	R68-600014	3/8" Nylon Tubing	6 ft.
7	169-168	Pipe Plug	2
8	S60-006	Check Assy.	4
9	145-103	3/8" Male Tee	2
10	S88-057	Housing Assy.	2
11	145-098	Male Connector	2

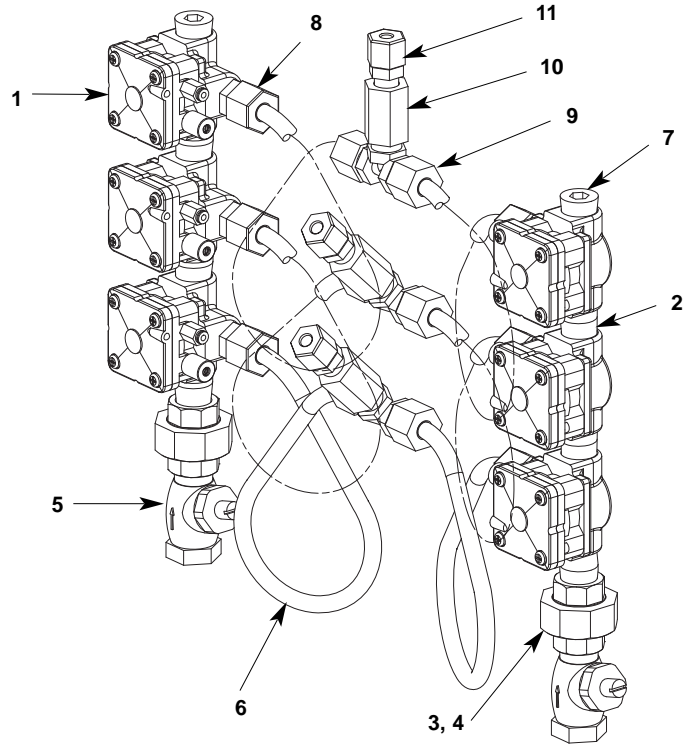


Manifold Service Parts

Manifold Assembly ADTM-3 (S45-1309)

PARTS LIST

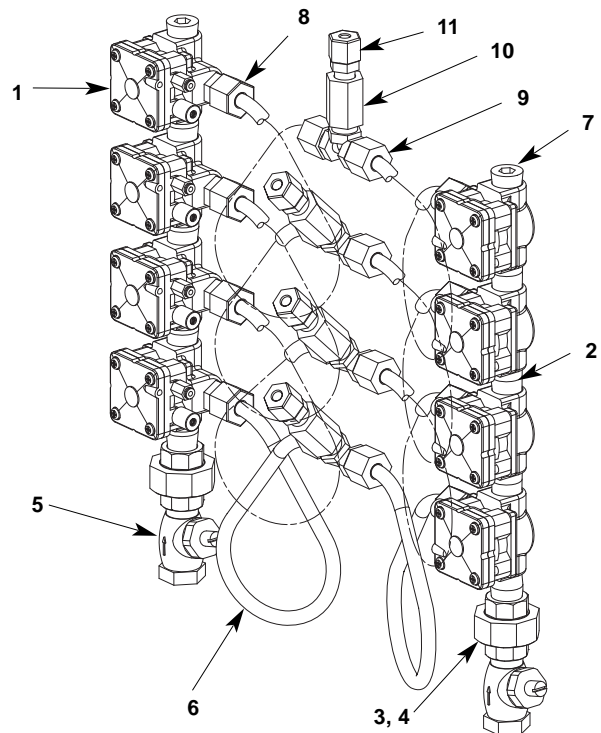
Item	Part No.	Description	QTY.
1	S07-058	Air Valve Assy.	6
2	113-006DH	1/2" Nipple	8
3	169-348	Union	2
4	269-475	Filter Washer	2
5	S27-102	Check Stop	2
6	R68-600014	3/8" Nylon Tubing	9 ft.
7	169-168	Pipe Plug	2
8	S60-006	Check Assy.	6
9	145-103	3/8" Male Tee	3
10	S88-057	Housing Assy.	3
11	145-098	Male Connector	3



Manifold Assembly ADTM-4 (S45-1310)

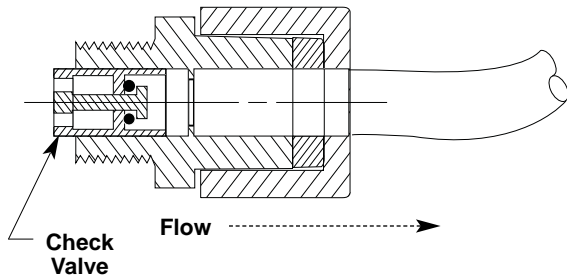
PARTS LIST

Item	Part No.	Description	QTY.
1	S07-058	Air Valve Assy.	8
2	113-006DH	1/2" Nipple	10
3	169-348	Union	2
4	269-475	Filter Washer	2
5	S27-102	Check Stop	2
6	R68-600014	3/8" Nylon Tubing	12 ft.
7	169-168	Pipe Plug	2
8	S60-006	Check Assy.	8
9	145-103	3/8" Male Tee	4
10	S88-057	Housing Assy.	4
11	145-098	Male Connector	4

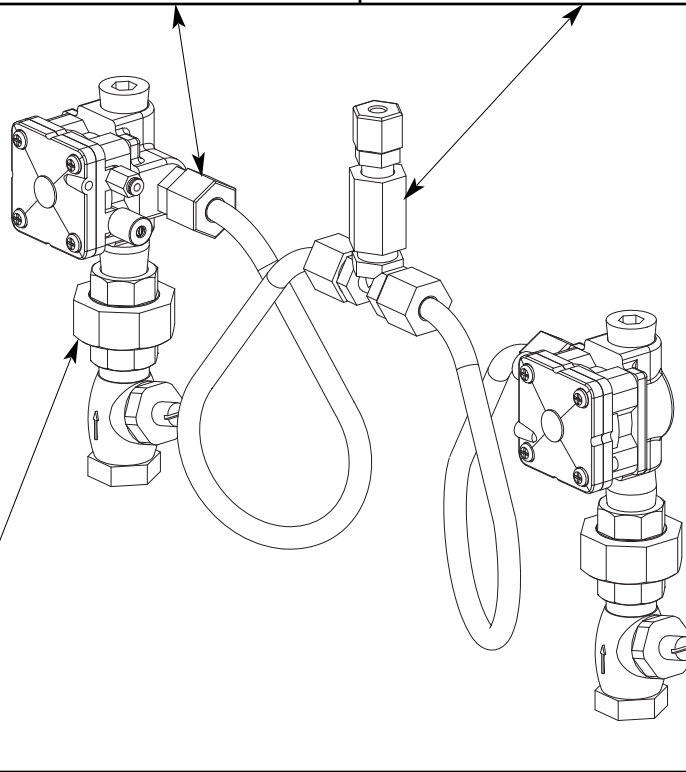
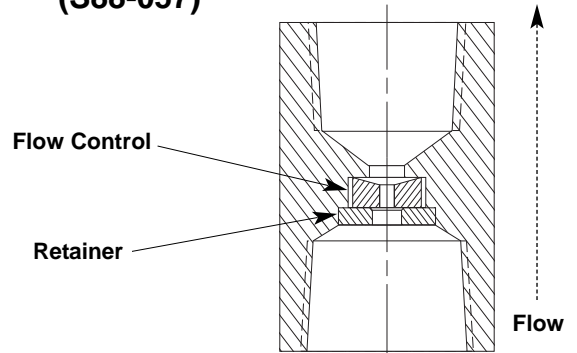


Check Valve, Flow Control and Union Service Parts

**Check Valve Assembly
(S60-006)**

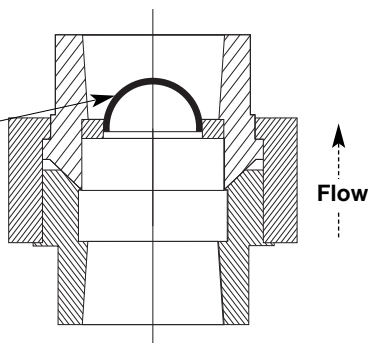


**Flow Control Housing
(S88-057)**



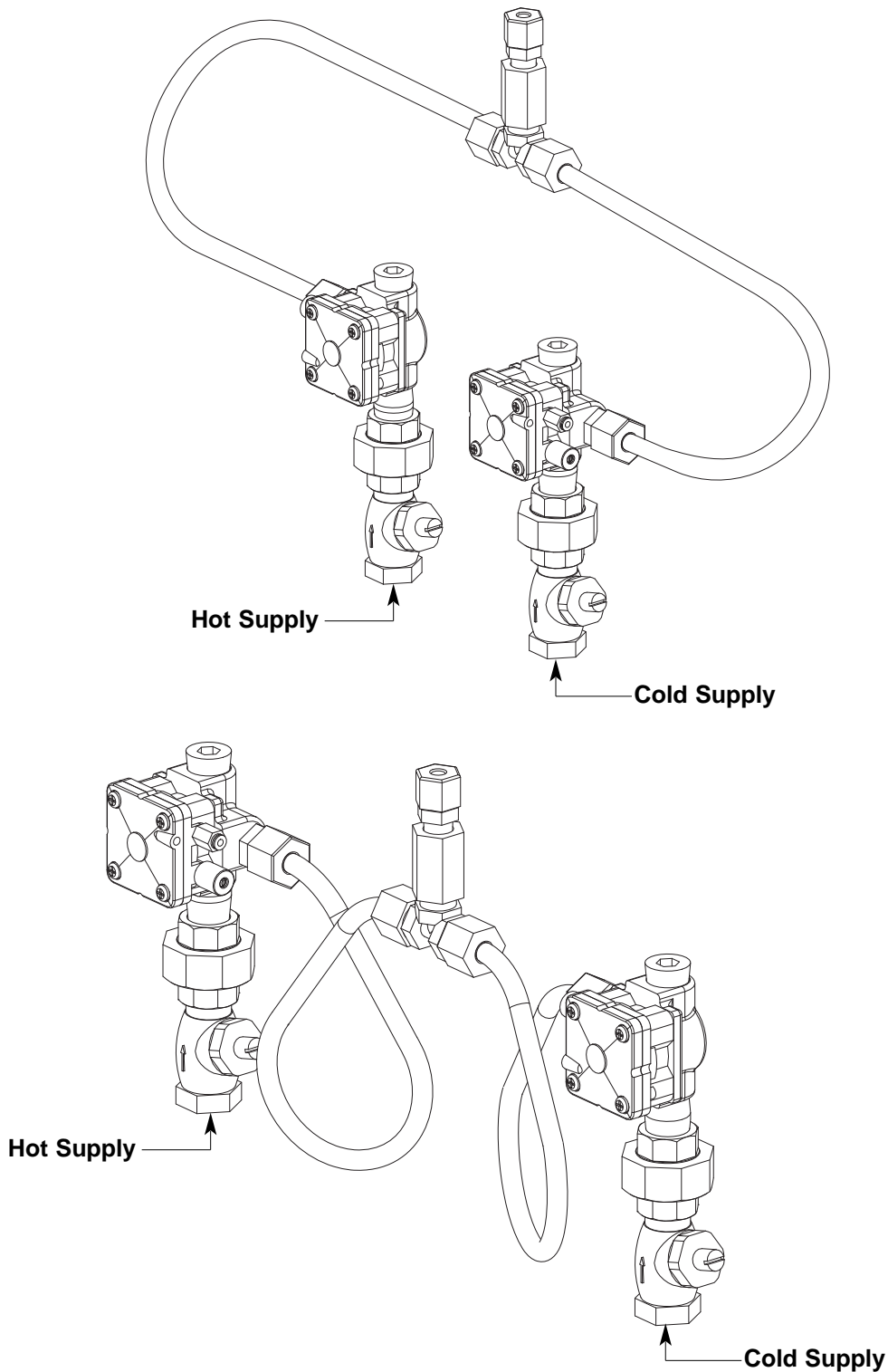
**Union
(169-348)**

**Filter Washer
(269-475)**
*Position washer
in union as
shown.*



Assembly Variations

The plastic tubing supplied with the air manifold assembly allows you to arrange the assembly a number of ways depending on space constraints. See the examples below.

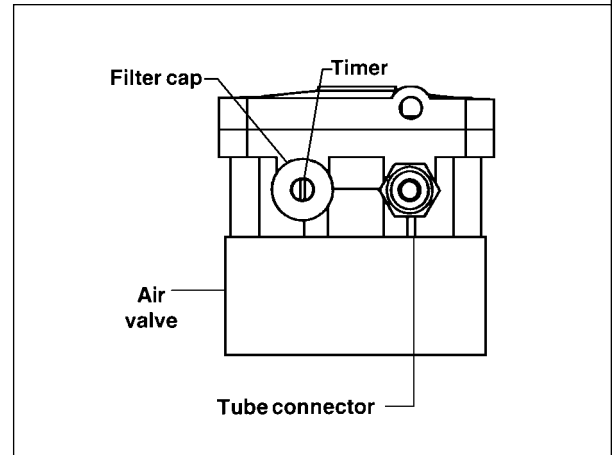


Air Metering Valve (AST) Troubleshooting

Adjust Air Valve Meter Time

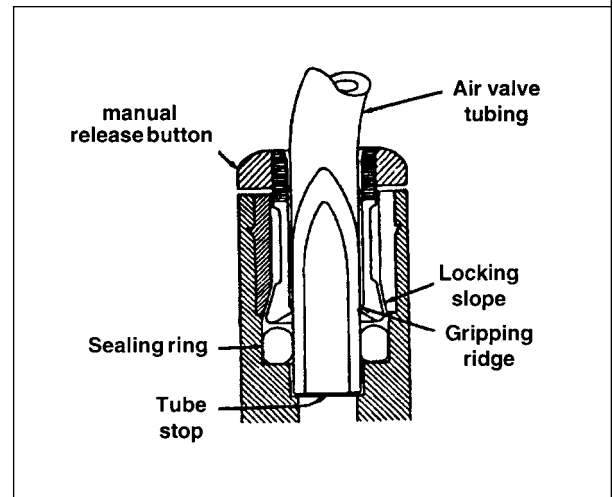
NOTE: The air valve timer is located next to the tube connector on the air valve body. The timer is capped with a filter to prevent dirt build-up on the timer. The air valve timing can be adjusting from 0–45 seconds.

1. Remove filter cap and use a screwdriver to tighten or loosen the timer. Turning the timer clockwise increases the time; turning the timer counterclockwise decreases the time.
2. Continue to adjust until the timer is set at desired length.
3. Replace filter cap over the timer.



Tube Connection Leaks

1. Push in the manual release button while pulling the tube out to disconnect the tube at the connector fitting. No tools are needed.
2. To correct a leak, press tubing firmly into the connector and make sure it is seated.
3. If leak persists, remove tubing from the fitting, and trim the tubing end square with a razor-sharp knife. If leak continues, replace the fitting or contact your Bradley representative for assistance.



Air Metering Valve (AST) Troubleshooting

Problem: Water is dripping from the aerators

Cause: Debris on valve seat or orifices

Step 1: Clean and inspect valve seat (Air Metering Valve Assembly and Components)

1. Remove screws and disassemble metering valve.
2. Clean valve seat and inspect for deep gouges or scratches. Replace if necessary.
3. Remove all debris that may be clogging center hole of the plastic diaphragm assembly and off-center hole in the rubber diaphragm.

Problem: Valve will not shut off

Cause: Timing mechanism is clogged

Step 1: Clean timing mechanism

1. Remove plastic sleeve from timer assembly.
2. Blow water and debris from timing mechanism if compressed air is available.
3. Turn the adjusting screw in all the way but do not force screw.
4. Turn adjusting screw out to desired cycle time.

Problem: Valve will not turn on

Cause: Water is not being supplied to unit

Step 1: Open all stops on the valve assembly

Problem: Timing cannot be adjusted for more than five seconds

Cause: There is an air leak

Step 1: Check assembly

1. Check all tubing and fittings for proper assembly.
2. Tighten all screws which hold valve together.

Problem: Pushbutton does not work properly

Cause: Air volume may not be sufficient to operate valve

Step 1: Check all fittings for air leaks

Problem: Valve cycles properly, but water does not form streams and drips from aerator

Cause: Tube connector is not seated properly

Step 1: Inspect and clean air flow control assembly

1. Replace 1/4" tubing as follows: cut 1/4" from the end of the tube to make sure the end is square, then insert into tube connector fitting.

