Please Read Prior to Installation:

INSTALLATION INSTRUCTIONS

1. Before installing any Ames assembly, **FLUSH THE LINE THOROUGHLY** to remove all debris, chips and other foreign objects. Failure to do so may make the assembly inoperable.

2. The Ames 2001SS and 3001SS Backflow Preventers may be installed in horizontal or vertical positions. **LOCAL WATER AUTHORITIES MUST APPROVE ALL INSTALLATION CONFIGURATIONS.**

3. **ALLOW SUFFICIENT CLEARANCE AROUND THE INSTALLED ASSEMBLY TO CONDUCT TESTING,** servicing, and inspection. Allow a minimum of 12" clearance to the bottom of the assembly.

4. If the double check or double check detector assembly is installed in a vault or pit, be sure proper drainage is available, flooding may cause a cross connection. **BE SURE TO CONTACT LOCAL CODE AUTHORITIES FOR PROPER INSTALLATIONS.**

5. **IF INSTALLING ON FIRE PROTECTION SYSTEM, BE SURE TO PURGE AIR FROM FIRE SYSTEM.** Fill system slowly with all inspector test valves open. Additional venting of air may be required.

6. The flange gasket bolts for the gate valves must be **retightened** during installation as the bolts may have loosened due to shipping.

* Refer to AWWA C509 and AWWA C600 for standard installation practices.

TESTING PROCEDURES

The following Test Procedure is one of several that is recognized throughout the United States for testing Backflow Preventers. The following procedure is not a specific recommendation. The Ames series of test kits are capable of performing any of the recognized Backflow test procedures. (See brochure for details.)

TESTING OF #1 CAM-CHECK

Requirements: The check valve shall be tight against reverse flow under all pressure differentials.

Step 1: Close gate valves.

Step 2: Open ball valves No. 2, 3, and 4. Verify that No. 1 gate valve is holding tight by observing that the discharge of water from ball valve No. 2 stops.

Step 3: Attach test kit "Vent" hose to No. 1 ball valve; "Low" hose to No. 2 ball valve and "High" hose to No. 3 ball valve. At this point valves (A) and (C) should be open and (B) should be closed.

Step 4: Open ball valve No. 4.

Step 5: Open ball valve No. 1. The needle of the differential gauge will indicate a pressure in excess of 15 PSID.

Step 6: Slowly open needle valve (B) until the differential gauge reads 10 PSID. Then close (B). The gauge reading will not change if No. 1 check is holding tight. If No. 1 check is leaking, the gauge will drop to 0.

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FLUID CONTROL SYSTEMS
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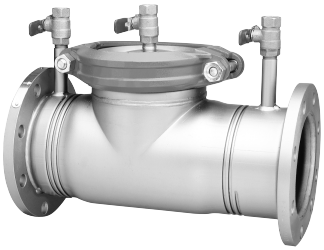


Ames Model 2001SS Double Check and 3001SS Double Detector Check Backflow Preventers

20001SSN and 3001SSN backflow preventers are identical in construction to 2001SS/3001SS series except they include short radius elbows between backflow preventer flange and gate valve flange.

General Installation, Maintenance and Parts Information 3" - 8"

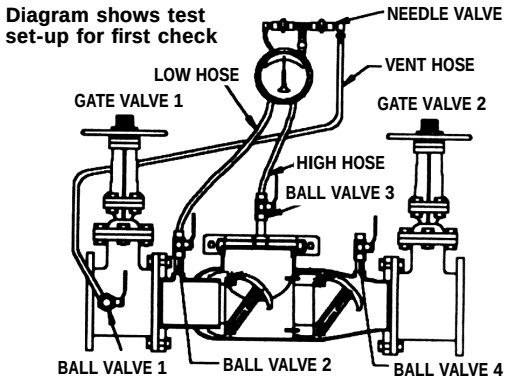


FIGURE 11

TESTING OF #2 CAM-CHECK

Requirements: The check valve shall be tight against reverse flow under all pressure differentials.

Step 1: Close ball valve No. 1.

Step 2: Open ball valve No. 4.

Step 3: Change "Low" hose from ball valve No. 2 to ball valve No. 3. Change "High" hose from ball valve No. 3 to ball valve No. 4. On the test kit, valves (A) and (C) should be open and valve (B) should be closed.

Step 4: Open ball valve No. 1. The pressure differential gauge will indicate a pressure in excess of 15 PSID.

Step 5: Slowly open needle valve (B) until the gauge reads 10 PSID, then close. If the gauge reading does not change, No. 2 check valve is holding tight. If No. 2 check is leaking, the gauge will drop to 0.

Note in the above testing: Minor leakage in shutoff valve No. 2 will not affect the test results. However, in the testing of the No. 1 check, leaking shutoff valve No. 1 would cause a good first check to fail the test.

It is important that this device be tested periodically in compliance with local codes, but at least once per year or more as service conditions warrant. If installed on a fire sprinkler system all mechanical checks, such as alarm checks, single checks and backflow preventers should be inspected internally every one to five years in accordance with NFPA 13 A and NFPA 25

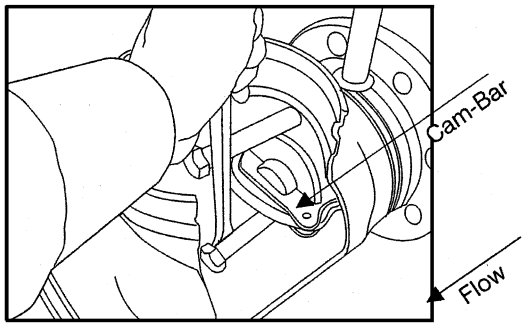
REMOVING CAM-CHECKS

Place yourself so that the water flow through the valve is left to right.

1. Shut down water system by closing two gate valves and lock out system if possible. Slowly open ball valves to relieve internal pressure. After pressure is relieved, loosen bolts on groove coupler and remove groove coupler and cover plate from valve body.

2. Unscrew (counter clockwise as viewed through the port facing the check) the #1 Cam-Check. Insert the two grooved coupler bolts into the holes in the face of the seat. Be sure that the pins or bolts are installed with one of each side of the cam bar as shown. Insert a long screwdriver or pry bar between opposing pins and loosen the check (counter clockwise) until it comes free to turn by hand. Finish unscrewing the Cam-Check by hand using the support ears for the clapper and cam bar to turn the check. (See fig #1A)

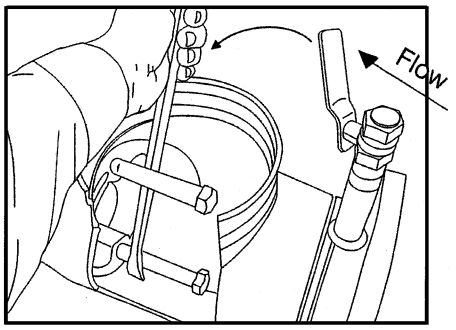
Figure #1A



3. Lift the Check straight up and out of the port access hold.

4. Using a pry bar across opposing pins in the #2 Cam-Check, loosen the #2 Cam-Check until it can be unscrewed by hand. Finish unscrewing the check by hand until it is free from the threads and spins out of the bore. (See fig. #1B). Remove #2 Cam-Check.

Figure #1B



5. Lift the Check straight up and out of the port access hole.

REPAIR KITS
3" - 8" 2001SS and 3001SS

TABLE #1

Item #	Part Description	Qty.	Ames Part No. 3"	4"	6"	8"
1.	#1 Cam-Check Assembly	1	7015574	7015574	7015583	7015583
2.	#2 Cam-Check Assembly	1	7015575	7015575	7015584	7015584
3.	1st Cam-Check O-ring (removable)	1	7013229	7013229	7013301	7013301
4.	2nd Cam-Check O-ring (removable)	1	7013188	7013188	7013301	7013301
5.	Groove Coupler	1	7013194	7013194	7013287	7013287
6.	Groove Coupler Gasket	1	7013248	7013248	7013308	7013308
7.	Ball Valve	2	7014668	7014468	A000449	A000449
8.	Ball Valve	1	A603134	A603134	7013034	7013034
9.	Cover Plate	1	7013241	7013241	7013289	7013289

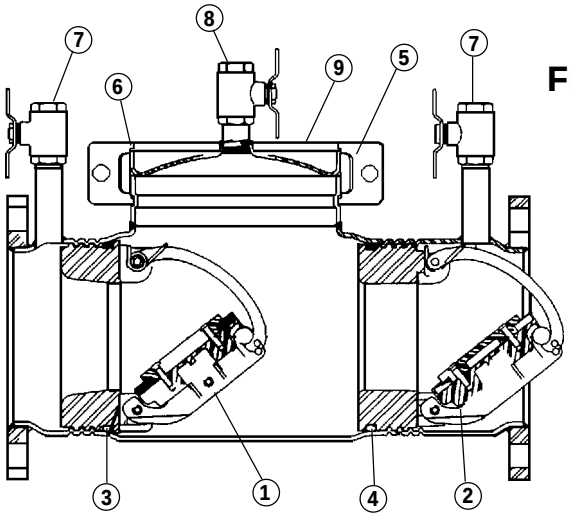


FIGURE 3

#1 CAM-CHECK

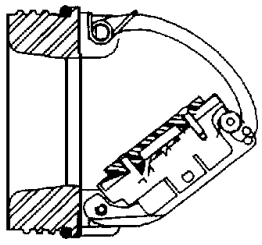


FIGURE 4

#2 CAM-CHECK

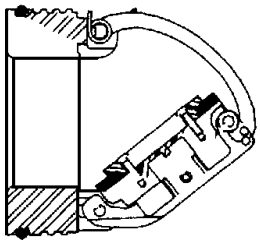


FIGURE 5

INSTALLING CAM-CHECKS

Prior to installing the Cam-Checks, ensure that all threads are clean and free of debris, grit, or other particles, Thoroughly clean O-rings grooves and lubricate O-rings with an FDA approved Lubricant.

A) First Install the #2 Cam-Check:

1. Insert the #2 Cam-Check through the cover port with the clapper facing down. Align the threads of the #2 Cam-Check with the threads in the body and start to thread the Check in by hand.

2. Tighten the #2 Cam-Check. Insert grooved coupler bolts into the holes in the rear face of the seat. Insert a long screw driver or pry bar between opposing pins and tighten the check (clockwise as viewed through the port facing the check) until it comes to a solid stop. Then back the check out about 15 degrees or from the 1:00 to the 12:00 position. (See Fig #1C)

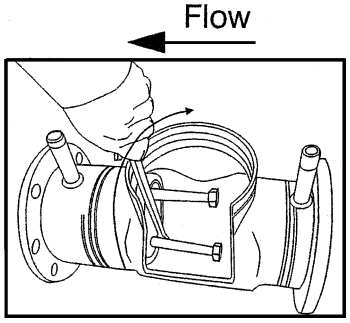


Figure #1C

B) Then Install the #1 Cam-Check:

1. Insert the #1 Cam-Check through the cover port with the clapper facing down. Align the threads of the #1 Cam-Check with the threads in the body and start to thread the Check in by hand - using the ears which extend from the seat ring to turn the check assembly. **DO NOT** use the clapper or the cam bar to turn the check assembly.

2. Tighten the #1 Cam-Check. Insert grooved coupler bolts into the holes in the face of the seat (or use the bolts from the lid groove coupler). Be sure that the pins or bolts are installed with one on each side of the cam bar. Insert a long screw driver or pry bar between opposing pins and tighten the check (clockwise as viewed through the port facing the check) until it comes to a solid stop. Then back the check out about 15 degrees or from the 1:00 position to the 12:00 position (See Fig #1D)

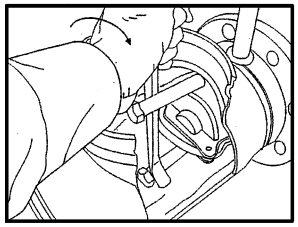


Figure #1D

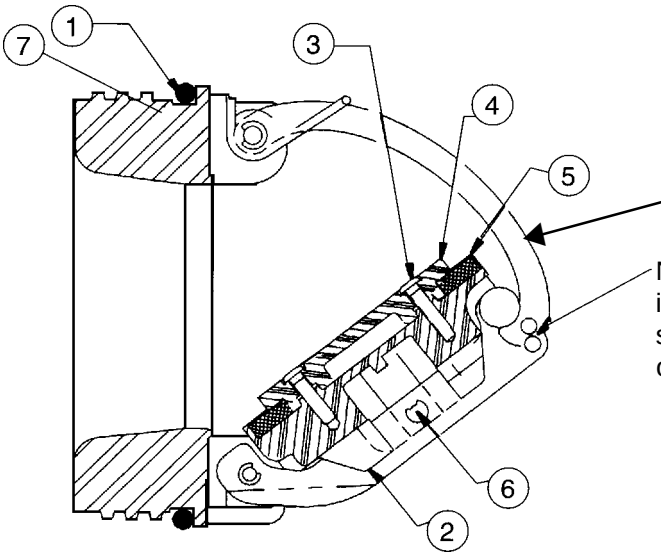
START UP: After re-installation of the cover plate and groove coupler - the downstream shut off valve should be closed. Open upstream gate slowly, fill the valve and bleed the air through Test cocks 2, 3 and 4. When valve is filled, open the downstream shut off slowly. Failure to bleed air from assembly may cause water hammer or shock damage to the water system.

NOTE: Ames assemblies require minimum maintenance. All assemblies must be retested once maintenance has been performed. ***Before servicing be certain shut off valves are closed.***

CAM-CHECK PARTS - TABLE #2

			AMES Part No.			
Item #	Part Description	Qty.	3"	4"	6"	8"
1.	1st Cam-Check O-ring (removable)	1	7013229	7013229	7013281	7013281
2.	Clapper Assembly (removable)	1	7014192	7014192	7014192	7014192
3.	Clapper Retaining Plate Screws (removable)	4	7013877	7013877	7013880	7013880
4.	Clapper Retainer Plate (removable)	1	7013835	7013835	7013836	7013836
5.	Clapper Disc (removable)	1	7013837	7013837	7013838	7013838
6.	Pivot Arm Pin (removable) 2 c-clips	1	7013853	7013853	7013841	7013841
7.	2nd Cam Check O-ring (removable)	1	7013188	7013188	7013281	7013281

FIGURE 6

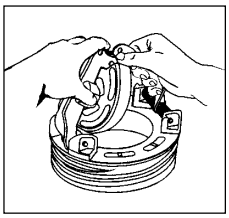


CAM-CHECK DISASSEMBLY

Please use caution when disassembling cam-check.

FIGURE 7

Using a thin rod or screwdriver, lift the cambar up so that the clapper is free to swing upwards away from the seat.



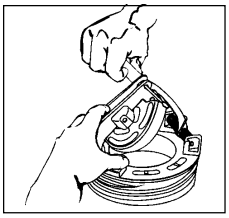


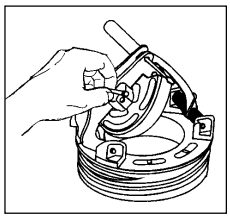
FIGURE 8

Using your free hand, swing the clapper open until the roller is almost to the free end of the cambar. Align the maintenance lockout holes in the cambar and the hinge arms.

Secure the check assembly in the maintenance position by inserting a rod or thin screwdriver through the lock-out holes.

FIGURE 9

Remove 1 c-clip from the center pivot pin. Withdraw the center pivot pin from the clapper and the hinge arms. Remove the clapper assembly from the check assembly module. Remove the retainer screws. **Note: You may replace this item as an assembly or you may continue and replace only the sealing disc.**



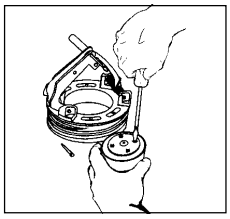


FIGURE 10

Disassemble the clapper by removing 4 screws, disc retainer and the sealing disc. Disc may be reversed if sealing surface is damaged.

Before reinstallation of check assembly, thoroughly clean O-ring groove and lubricate O-ring with F.D.A. approved lubricant**.**

TROUBLE SHOOTING GUIDE

PROBLEM: Check Valve fails to hold minimum pressure differential

CAUSE	SOLUTION
Debris on seating area	Eliminate debris
Leaking gate valve (this is determined separately during the test procedure)	Repair or replace
Damaged seat	Disassemble and replace
Damaged clapper plate	Disassemble and replace
Damaged O-ring	Disassemble and replace

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

(Installer: California law requires that this warning be given to the consumer.)

For more information: www.wattsind.com/prop65

LIMITED WARRANTY (Full description of limited warranty is found in Ames Product catalog.)

This Ames warranty is expressly in lieu of any other warranties, expressed or implied, including without limitation, warranties of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Ames shall not be responsible for any incidental or consequential damages including without limitation, damages or other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemicals, or any other circumstances over which Ames has no control.

No statement, representation, agreement or understanding, oral or written, made by agent, by an authorized Ames dealer, an Ames representative or employee which is not contained in this limited warranty will be recognized or enforceable or binding upon Ames Company, Inc. Only a written statement signed by an officer of Ames may modify this limited warranty.

Any action for breach of any Ames Warranty must be commenced within one (1) year after date on which cause of action occurred.

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FLUID CONTROL SYSTEMS

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