

SEMI-ANNUAL MAINTENANCE EXAMINATION (Continued)

10. Check each tank adaptor by completing the following:

- a. Examine threads on each tank adaptor and tank collar for nicks, burrs, or cross-threading.
- b. Clean and coat O-ring with a good grade of extreme temperature grease. See Figure 4.
- c. Make certain bursting disc is in place and silver side is away from tank.
- d. Remove 1/4 in. vent plug.
- e. Clean and inspect for free movement and corrosion. Replace if necessary.
- f. Reinstall vent plug into adaptor body.
- g. Clean seating surface and return adaptor/tube assembly to each tank.
- h. Tighten securely.

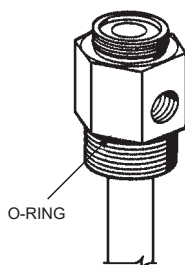


FIGURE 4
000364

11. Place fully charged tanks in enclosures and secure.
12. Carefully assemble and wrench tighten all expellant gas hoses, water hoses, and agent distribution piping.
13. Remove blow-off caps from nozzles. Inspect each blow-off cap and replace if deteriorated. On metal blow-off caps, make certain spring clip rotates freely on cap.

NOTICE

Rubber blow-off caps that have been installed in the system for one year or more must be replaced.

14. Check all nozzles to ensure that they are free of cooking grease build-up and have a covering of clean silicone grease on the orifice. Reinstall blow-off caps.
15. Remove the lock bar and manually test the regulated release assembly by operating the remote manual pull station. Check pull station cover for damage or wear. Replace cover if cable has worn a groove in the cover as deep as the diameter of the cable.
16. Cock the regulated release mechanism using cocking lever (Part No. 14995). See Figure 5.

Before proceeding with Step 18, test electric (snap-action) switches:

- a. With the ANSUL AUTOMAN in the cocked or ready position, press the lever of each switch up. If the switch is working properly, there should be an audible click.
- b. With the ANSUL AUTOMAN in the fired position, press the lever of each switch up, there should be no audible click.

- c. If an audible click is heard in the fired position several adjustments can be made. The trip lever extension pin can be rotated so the peak of one of the hex points is pointed up against the switch levers. Tighten it in that position. If this doesn't resolve the problem, loosen the screws holding the switches, apply a small counterclockwise torque on the switches and retighten the screws. If necessary, a final adjustment can be made by removing the snap action switch and bending the lever slightly.
- d. After adjustments, repeat Steps a. and b. Then, recock ANSUL AUTOMAN and insert lock bar.

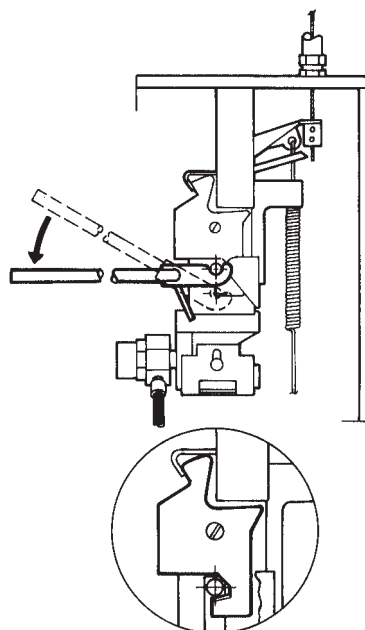


FIGURE 5
000320

17. Raise tension lever to "UP" position. See Figure 6.

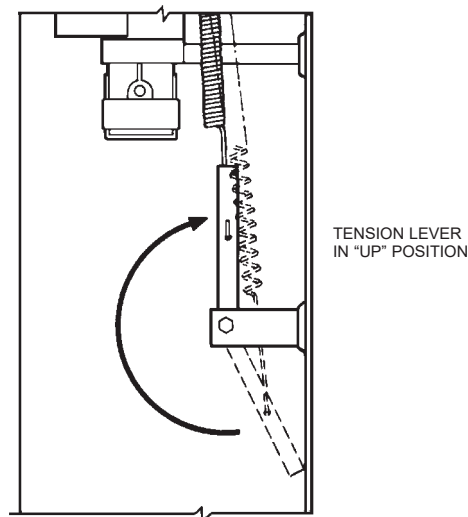


FIGURE 6
000322

SEMI-ANNUAL MAINTENANCE EXAMINATION (Continued)

18. Install test link (Part No. 15751) in terminal detector.

19. Lower tension lever to "DOWN" position. See Figure 7.

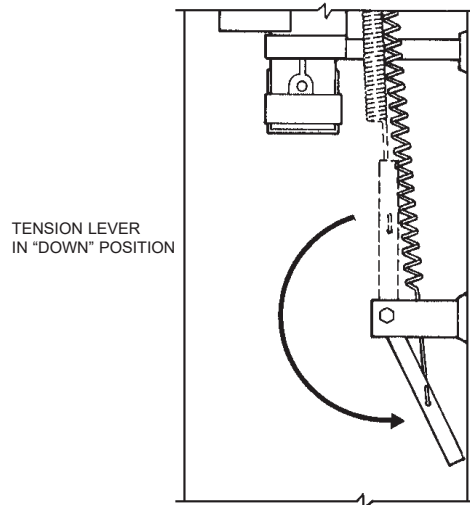


FIGURE 7
001096

20. Using wire cutter, cut test link at terminal detector to simulate automatic actuation.

NOTICE

If regulated release mechanism does not actuate, refer to Steps 2 and 3 of "Testing Detection System" in "Testing and Placing in Service," Section VI.

21. After successful actuation, raise the tension lever to "UP" position.

22. Clean and return properly-rated, Ansul approved, fusible link to terminal detector.

NOTICE

Fusible links installed in system for one year or more must be replaced. Ansul recommends replacement of links every six months.

23. Remove, clean, and return additional fusible links to series detector linkage(s). (Fusible links loaded with grease and other extraneous material can result in excessive delays in actuation. If links cannot be properly cleaned, they must be replaced.)

24. Inspect wire rope at all detector locations, pulley elbows, pulley tee and at ANSUL AUTOMAN release. If wire rope shows signs of wear or fraying, replace entire length.

25. Lower the tension lever to "DOWN" position.

26. Recock the regulated release mechanism and insert the lock bar.

27. Inspect the base of the wire rope clamping device to make certain that there is a minimum of 1/4 in. (6.4 mm) to a maximum of 3/8 in. (9.5 mm) clearance between the base of the trip hammer assembly and the cable lever assembly. See Figure 8.

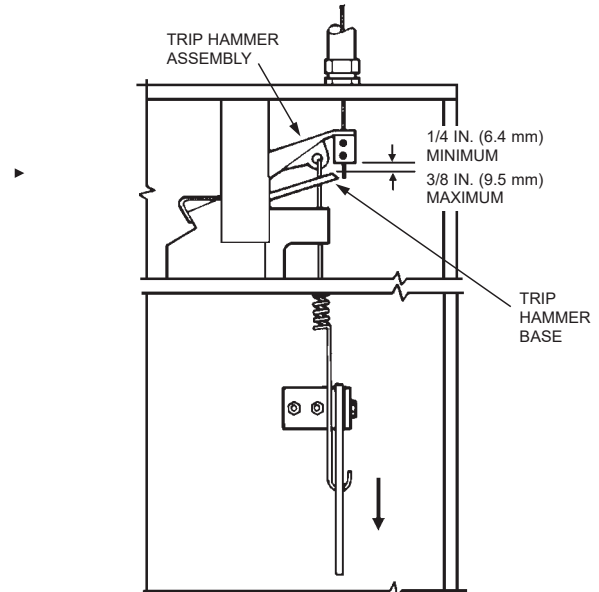


FIGURE 8
000329

NOTICE

If clearance is not 1/4 in. (6.4 mm) minimum to 3/8 in. (9.5 mm) maximum, raise tension lever to "UP" position, raise trip hammer 3/8-1/2 in. (9.5-12.7 mm), tighten set screws, and repeat Steps 25 and 27.

28. Locate detector linkage and properly position in each bracket. For "scissor" style linkage, locate linkage in bracket all the way toward termination end of detection run.

29. If a mechanical gas valve is installed, begin the test procedure by removing both side covers.

30. At the regulated release, push the air cylinder rod fully down.

31. The gas valve should operate.

32. Pull the air cylinder rod to its fully extended position.

33. Re-cock the gas valve by pulling the valve stem up until the pin in the stem engages the cocking lever.

34. Reinstall side covers on the gas valve and connect the visual indication seal.

35. Before reinstalling cartridge, reset all additional equipment by referring to appropriate section of "Recharge and Resetting Procedures," Section VII.

36. Remove shipping cap and weigh each nitrogen cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge. NOTE: If checking 101-10 Carbon Dioxide Cartridge in 101 Remote Release, replace if weight is 1/4 oz. (7.1 g), or more, below weight stamped on cartridge.

37. Make certain regulated release mechanism is cocked and lock bar is installed, then screw replacement cartridge into regulated release mechanism and each regulated actuator receiver(s) and hand tighten.

38. Remove lock bar.

39. Secure cover on regulated release assembly and each regulated actuator assembly, insert visual seal (Part No. 197) in each upper and lower cover hole.

40. Record installation date on tag attached to unit and/or in a permanent file.

SECTION VIII – MAINTENANCE EXAMINATION

UL EX. 5174 8-1-99 Page 8-4

REV. 2

SEMI-ANNUAL MAINTENANCE EXAMINATION (Continued)

Waterline Flow and Pressure Test

The waterline should be flushed and the pressure verified during the semi-annual maintenance. It is the Ansul Distributor's responsibility to conduct the PIRANHA flowing pressure test at the time of day when the building experiences the highest domestic water usage, or during an off peak period while simultaneously flowing the equivalent highest domestic water usage for the building.

- ▶ The pressure range of the water system must be within the range stated in the "Water Supply Requirements" on Page 12-13 in the Design section.

Complete the following steps:

1. Attach water pressure tester, Part No. 423556, to pressure test port in ANSUL AUTOMAN Release and any additional Regulated Actuators. Make certain valve on tester is closed.
- ▶ 2. Attach a 5/8 in. garden hose to each pressure tester and run to a drain or sink. **NOTE:** Hose must not exceed 25 ft. long.
- ▶ 3. Open test valve in the ANSUL AUTOMAN Release and any regulated actuator.
4. Open valves on each water pressure tester and allow water to flow for approximately 30 seconds.
5. Read pressure on all test kit gauges to verify that it reads between the pressure ranges stated in Water Supply Requirements, listed in the Design Section.
6. Close all test port valves and remove test kits and hoses.
7. Visually inspect lockable shut-off valve in dedicated waterline to determine it is properly locked open and tag is in place.
8. Install cover on regulated release and each regulated actuator. Insert visual seal, Part No. 197, through holes in cover and box, and secure.
- ▶ 9. Record semi-annual maintenance date on tag attached to unit and/or in a permanent file.

12-YEAR MAINTENANCE EXAMINATION

Twelve-year maintenance procedures for single, double, and multiple-tank systems are as follows.

NOTICE

Under certain circumstances hood and duct cleaning operations may render your fire suppression system ineffective due to a coating of cleaning chemical left on the detection equipment or mishandling of the system by cleaning service personnel.

Therefore, it is strongly recommended that the PIRANHA system be completely inspected and serviced by an authorized Ansul distributor immediately following any such cleaning operations.

At twelve-year intervals, the liquid agent tank(s) must be hydrostatically tested and refilled with a fresh charge of PRX Liquid Fire Suppressant. The date of manufacture is stamped on the bottom of the agent tank.

1. Remove the enclosure cover from the ANSUL AUTOMAN regulated release assembly and each regulated actuator assembly.

2. Insert the lock bar (Part No. 14985) on the cocked regulated release mechanism. See Figure 9.

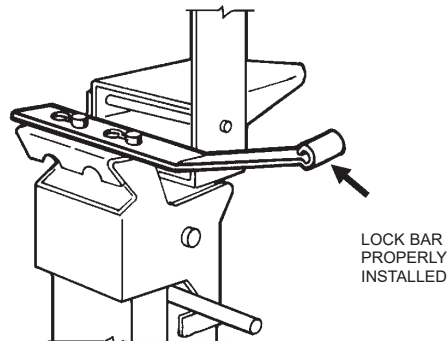


FIGURE 9

000321

3. Remove cartridge from regulated release assembly and each regulated actuator assembly, install safety shipping cap, and set aside in a safe location.



CAUTION

Do not reinstall cartridge at this time or system may be actuated.

4. Remove gasket from cartridge receiver in regulated release mechanism and each regulated actuator. Check gasket for elasticity or cuts and replace if necessary. Clean and coat gasket lightly with a good grade of extreme temperature grease. Reinstall gasket into cartridge receiver(s).
5. From tank in enclosure: Disconnect the actuation gas hose and the water hose from each tank adaptor assembly.
6. Disconnect distribution piping union at each tank adaptor outlet line.
7. Remove tank.
8. Loosen tank adaptor/tube assembly and remove.
- 9.



CAUTION

Safety glasses should be worn during transfer operations of PRX Liquid Fire Suppressant. Avoid contact with skin or eyes. In case of contact, flush immediately with water for 15 minutes. If irritation persists, contact a physician. Do not take internally. If taken internally do not induce vomiting. Dilute with water or milk and contact a physician.

Pour the liquid agent from the tank into a plastic container, and flush tank with clear water. Dispose of agent.

10. At this point, each liquid agent tank, including the 1/4 in. gas hose assembly and the 3/4 in. water discharge hose assembly, must be **HYDROSTATICALLY TESTED** to 450 psi (31.0 bar). Verify date stamped on cartridge. The cartridge must be hydrotested at intervals not greater than 12 years. If cartridge date indicates the need for hydrotesting, the cartridge must be bled down through normal ANSUL AUTOMAN release operation, returned to Ansul for credit, and replaced with a charged, replacement cartridge.

NOTICE

Cartridge bleed down can be used to verify pneumatic accessories operation.

12-YEAR MAINTENANCE EXAMINATION (Continued)

11. The regulator must be flow tested at 12 year intervals. Check the date code stamped on the regulator body to determine if the regulator(s) requires the 12 year testing (see Date Code Table). If regulator does not require testing, proceed to Step 12. Flow test the regulator(s) per the following:

Date Code Table

Month – Code		Year – Code	
January	A	1997	D
February	B	1998	E
March	C	1999	F
April	D	2000	G
May	E	2001	H
June	F	2002	J
July	G	2003	K
August	H	2004	L
September	J	2005	M
October	K	2006	N
November	L	2007	O
December	M	2008	P
		2009	Q
		2010	R

a. Regulated Release Mechanism

For First Tank: Disconnect expellant gas hose from tank. Connect regulator test kit (Part No. 56972) to hose. See Figure 10.

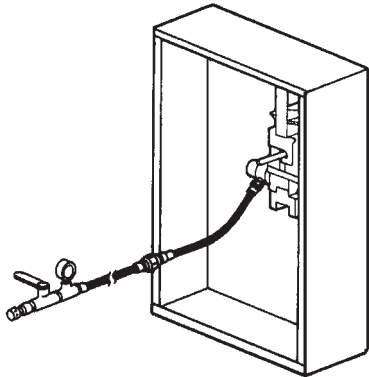


FIGURE 10
000369

For Second Tank: Disconnect expellant gas piping at union. Remove union from expellant gas piping and install pipe cap to prevent cartridge pressure from escaping during test. See Figure 11.

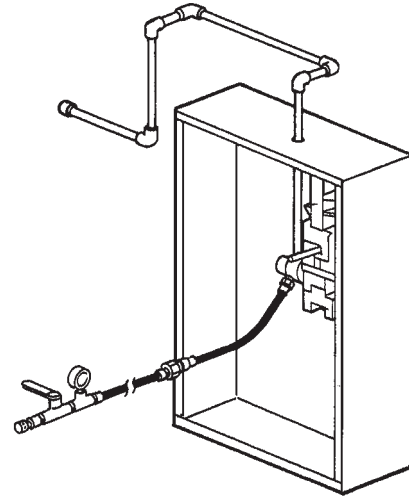


FIGURE 11
000370

Pressure Switch: If pressure switch is provided, it should remain connected as part of system maintenance test.

NOTICE

For multiple-tank systems, one test kit (Part No. 56972) is required for each regulator in the system.

b. Regulated Actuator

For First Tank: Disconnect expellant gas hose from tank. Connect regulator test kit (Part No. 56972) to hose. See Figure 12.

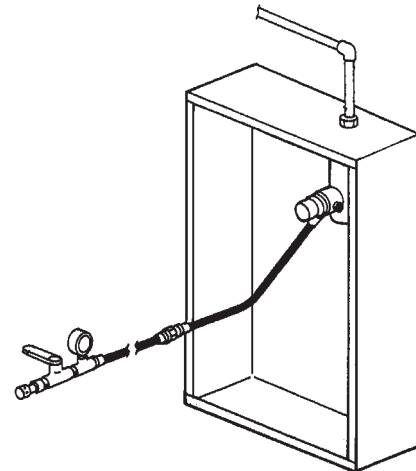


FIGURE 12
000371

SECTION VIII – MAINTENANCE EXAMINATION

UL EX. 5174 6-1-04 Page 8-6

REV. 4

12-YEAR MAINTENANCE EXAMINATION (Continued)

11. b. (Continued)

For Second Tank: Disconnect expellant gas piping at union. Remove union from expellant gas piping and install pipe cap to prevent cartridge pressure from escaping during test. See Figure 13.

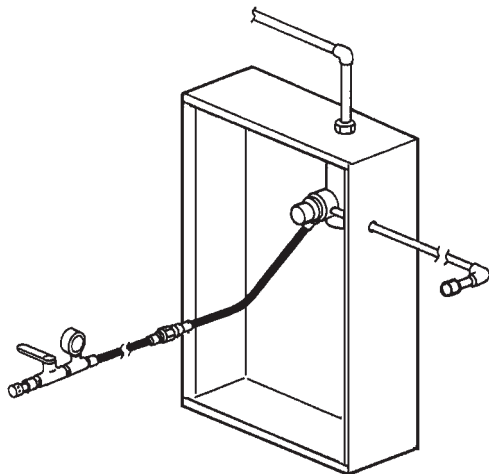


FIGURE 13
000372

NOTICE

Make certain valve is **CLOSED** on regulator test kit or pressure will escape before test can be performed.

- c. Install LT-30-R nitrogen cartridge(s) into release mechanism and each regulated actuator provided with the system. (Cartridge should be conditioned to approximately 70 °F (21 °C) before test.)
- d. Remove lock bar and operate remote manual pull station to actuate the regulated release and supply pressure to each test kit.
- e. Flow test each regulator by completing the following steps:
 - Open test kit valve fully and check gauge while pressure is bleeding off. Gauge reading should stabilize between 135-165 psi during the first 10 seconds of flow. Pressure will fall off as the cartridge is exhausted of nitrogen.
 - Allow cartridge pressure to completely bleed off.
 - If necessary, continue flow test at each additional regulated actuator. Test each regulated actuator by repeating Step e.
- f. Cock release mechanism using cocking lever (Part No. 14995) and insert lock bar (Part No. 14985).
- g. Remove empty nitrogen cartridge(s) from release mechanism and each regulated actuator.
- h. Remove test kit(s) from release mechanism and each regulated actuator.
- i. If regulator test was not successful, replace regulator.
- j. Reconnect all expellant gas lines.
- k. Reset all additional equipment that was operated by release mechanism.

12. Check each tank adaptor by completing the following:

- a. Examine threads on each tank adaptor and tank collar for nicks, burrs, or cross-threading.
- b. Clean and coat O-ring with a good grade of extreme temperature grease. See Figure 14.
- c. Make certain bursting disc is in place and silver side is away from tank.
- d. Remove 1/4 in. vent plug.
- e. Clean and inspect for free movement and corrosion. Replace if necessary.
- f. Reinstall vent plug into adaptor body.

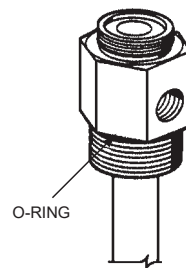


FIGURE 14
000364

13. Refill each tank with 1.5 gallons (5.8 L), 2.25 gallons (8.5 L), or 3.0 gallons (11.6 L) of new PRX Liquid Fire Suppressant. When filled, level of liquid should be 1 – 1 1/8 in. (25.4-28.6 mm) from bottom of fill opening. See Figure 15.



CAUTION

Make certain tank is filled to 1 – 1 1/8 in. (25.4-28.6 mm) from bottom of fill opening. During filling, the agent temperature should be 60 °F to 80 °F (16 °C to 27 °C). **DO NOT FILL WITH COLD AGENT. DO NOT OVERFILL.**



CAUTION

Do not mix PRX agent with Ansul LPH agent. If mixed, suppression capability will not be performed properly.

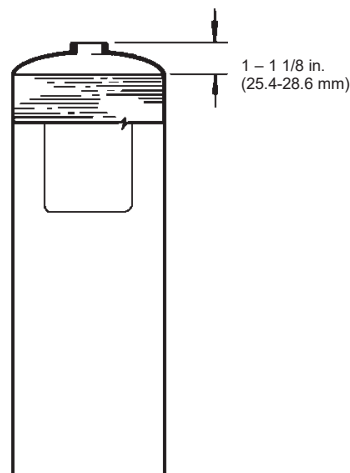


FIGURE 15
000292

12-YEAR MAINTENANCE EXAMINATION (Continued)

14. Clean seating surface and return each adaptor/tube assembly to tank. Firmly tighten.

NOTICE

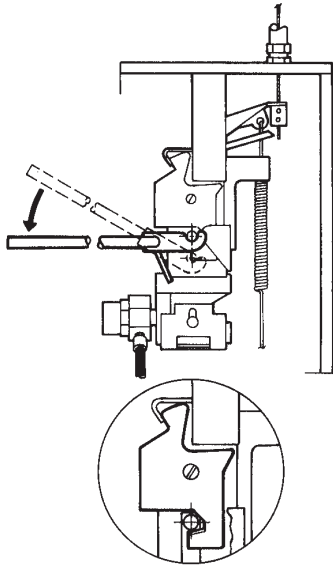
Do not reinstall any tank at this time.

15. Remove blow-off caps from nozzles. Inspect each blow-off cap and replace if deteriorated. On metal blow-off caps, make certain spring clip rotates freely on cap.

NOTICE

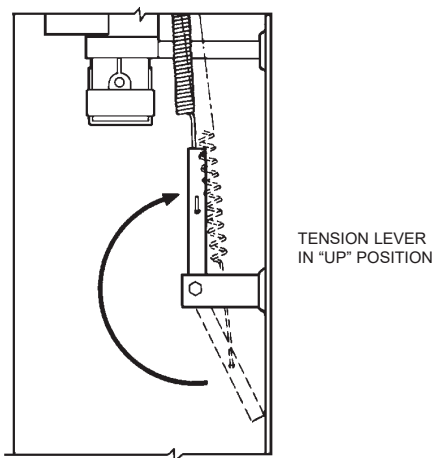
Rubber blow-off caps that have been installed in the system for one year or more must be replaced.

16. Check all nozzles to ensure that they are free of cooking grease build-up and have a covering of clean silicone grease on the orifice. Reinstall blow-off caps.
17. Remove lock bar and manually test the regulated release assembly by operating the remote manual pull station.
18. Cock the regulated release mechanism using cocking lever (Part No. 14995). See Figure 16.

**FIGURE 16**

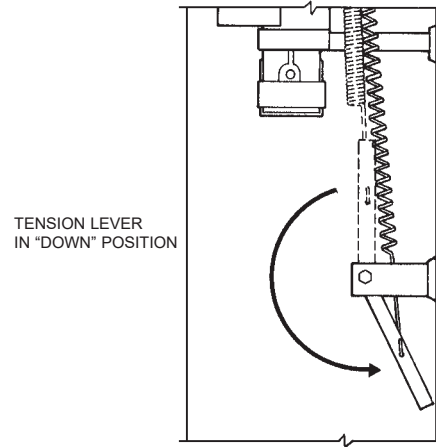
000320

19. Raise the tension lever to "UP" position. See Figure 17.

**FIGURE 17**

000362

20. Install test link (Part No.15751) in terminal detector.
21. Lower tension lever to "DOWN" position. See Figure 18.

**FIGURE 18**

001096

22. Using wire cutter, cut test link at terminal detector to simulate automatic actuation.

NOTICE

If regulated release mechanism does not actuate, refer to Steps 2 and 3 of "Testing Detection System" in "Testing and Placing in Service," Section VI.

23. After successful actuation, raise the tension lever to "UP" position.
24. Clean and return properly-rated, Ansul approved, fusible link to terminal detector.

NOTICE

Fusible links installed in system for one year or more must be replaced.

25. Remove, clean, and return additional fusible links to series detector linkage(s). (Fusible links loaded with grease and other extraneous material can result in excessive delays in actuation.)
26. Lower tension lever to "DOWN" position.
27. Recock the regulated release mechanism and insert lock bar.

SECTION VIII – MAINTENANCE EXAMINATION

UL EX. 5174 8-1-99 Page 8-8

REV. 2

12-YEAR MAINTENANCE EXAMINATION (Continued)

28. Inspect the base of the wire rope clamping device to make certain that there is a minimum of 1/4 in. (6.4 mm) to a maximum of 3/8 in. (9.5 mm) clearance between the base of the trip hammer assembly and the cable lever assembly. See Figure 19.

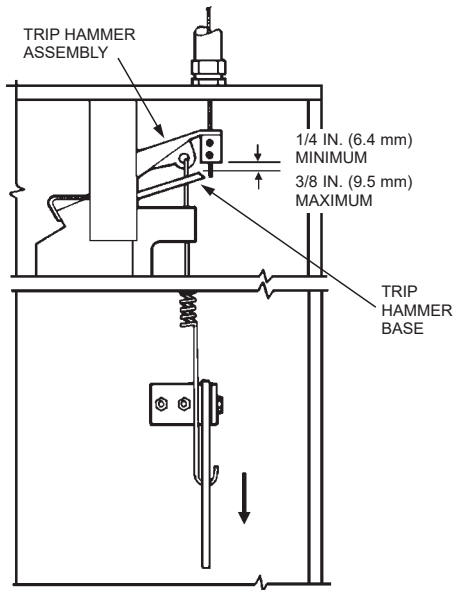


FIGURE 19

000329

NOTICE

If clearance is not 1/4 in. (6.4 mm) minimum to 3/8 in. (9.5 mm) maximum, raise tension lever to "UP" position, raise trip hammer 3/8-1/2 in. (9.5-12.7 mm), tighten set screws, and repeat Steps 26 and 28.

38. Install cover on regulated release assembly and each regulated actuator assembly and secure with appropriate fasteners or visual inspection seal. If applicable, insert seal, Part No. 197, in each upper and lower cover hole. If system is installed in an OEM enclosure, attach enclosure cover and secure with appropriate hardware or procedure.
39. Record date of 12 year maintenance examination on tag attached to enclosure and/or in a permanent file.
29. Locate detector linkage and properly position in each bracket.
30. Make certain additional devices have operated as intended.
31. Before reinstalling cartridge, reset all additional equipment by referring to appropriate section of "Recharge and Resetting Procedures," Section VII.
32. Place each fully charged tank in enclosure and/or bracket and secure.
33. Reconnect all distribution piping, actuation hose and water hose as required. Wrench tighten.
34. Check each gas cartridge by removing shipping cap and weighing cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge.
35. Make certain regulated release mechanism is cocked and lock bar is installed, then screw replacement cartridge into regulated release mechanism and each regulated actuator receiver(s) and hand tighten.
36. Remove lock bar.
37. Place regulated release assembly and each regulated actuator assembly enclosure cover in-place.

The PIRANHA Self-Contained option is equipped with its own water supply tank. It requires no domestic water supply. This option is ideal for hazards where the building water supply is not sufficient, because of either water volume or pressure, to properly supply the PIRANHA system.

This section contains the additional information required to properly design, installation, test, recharge, and maintain a self-contained system. Various instructions in other sections will also be used for the PIRANHA self-contained option. Refer back to these sections when utilizing the self-contained option.

COMPONENTS

These components are in addition to the standard system components listed in Section III-System Components, Pages 3-1 to 3-10. Some components listed in Section III are not appropriate for use with the Self-Contained option. In that section, those components are noted as "not to be used with the self-contained design option."

Water Supply Tank

A 40-gallon (151 L) water supply tank is available for the PIRANHA 7, 10, and 13. The water tank is constructed of mild steel with a rust-inhibitive coating (epoxy paint) both internal and external. The Self-Contained Water Supply Tank is equipped with an outlet adaptor and pick-up tube.

40 gallon (151 L) – Part No. 432597

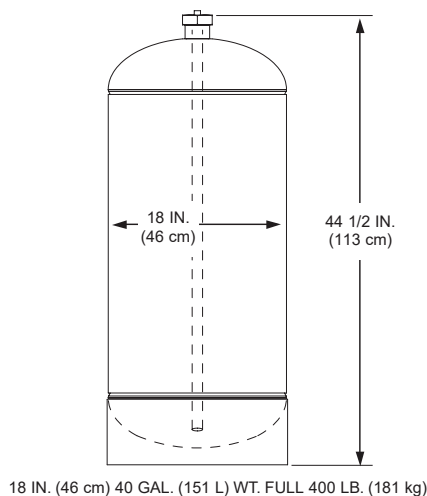


FIGURE 1
006822

Self-Contained Regulated Release Assembly (Mechanical)

The ANSUL AUTOMAN Self-Contained Regulated Release Assembly (Mechanical), Part No. 432283, is to be used with the self-contained option **ONLY**. This assembly contains the regulated release mechanism, expellant gas hose for agent hookup, and enclosure knockouts to facilitate installing actuation piping; expellant piping; detection system; and additional equipment. This regulated release assembly must be mounted on a rigid surface. The regulator is designed to regulate the nitrogen cartridge pressure to 150 psi (10.3 bar) and allow a constant flow of gas into the agent tank when the system is actuated.

The assembly is shipped with two factory installed single-pole, double throw (SPDT) electrical switches.

Agent tanks must be ordered separately and must be mounted within the enclosure. See Section III, "Components," for detailed tank information.

The system can be actuated automatically or manually. Automatic actuation occurs when a fusible link within the detection system separates in a fire condition. Manual actuation of the system occurs when personnel pull on the remote manual pull station pull ring.

Cartridges must be ordered separately. See Section III, "Components," for detailed cartridge information.

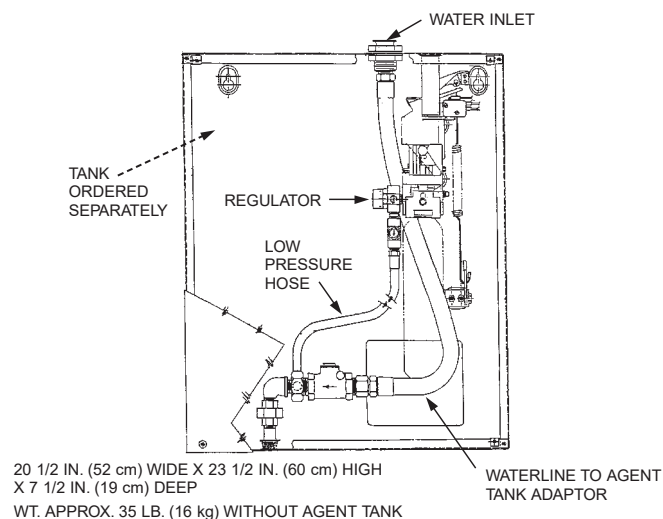


FIGURE 2
006823

Self-Contained Mechanical Regulated Release Assembly With OEM Bracket

The Self-Contained Mechanical Regulated Release Assembly with OEM Bracket, Part No. 432595, contains the same release mechanism and water flow components as the standard mechanical regulated release assembly without being housed in a stainless steel enclosure. The assembly is attached to a metal backplate for mounting inside a cabinet or appliance stand.

Cartridges must be ordered separately. See Section III, "Components," for detailed cartridge information.

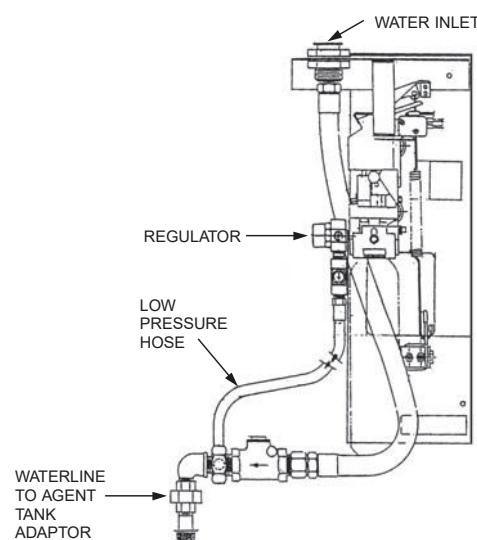


FIGURE 3
006824

COMPONENTS (Continued)

Water Tank Expellant Gas Assembly

The Water Tank Expellant Gas Assembly, Part No. 432528, consists of two (2) pneumatic actuators, one (1) 75 psi (5.2 bar) regulator, and a stainless steel hose and fittings for actuator connection. These components are housed in a stainless steel enclosure. This assembly is utilized to expel the water from the water supply tank.

The Water Tank Expellant Gas Assembly requires two (2) LT-A-101-30 nitrogen cartridges, Part No. 423491. Cartridges and cartridge brackets must be ordered separately.

Note: This shipping assembly includes the first initial bottle of anti-algae concentrate, Part No. 432656.

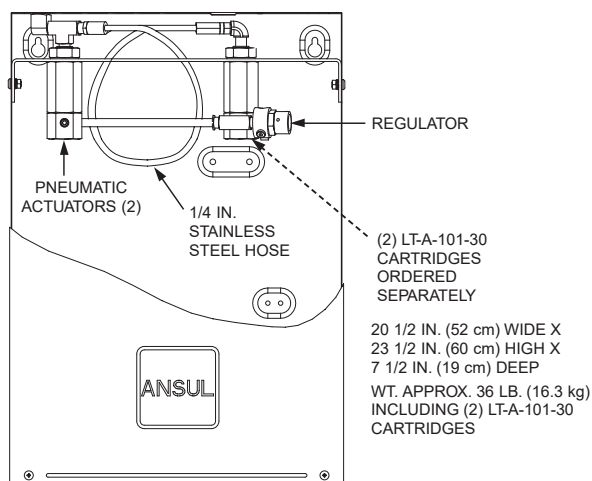


FIGURE 4
006825

LT-A-101-30 Expellant Gas Cartridge

The LT-A-101-30 Expellant Gas Cartridge, Part No. 423491, is a sealed pressure vessel containing nitrogen gas under pressure. When the cartridge seal is punctured by the pneumatic actuator pin, the gas flows into the water supply tank and carries it through the distribution piping network and out the nozzles.

The expellant gas cartridge meets the requirements of DOT 3A-2100. The cartridge has been approved for both Dept. of Transportation (DOT) and Transport Canada (TC).

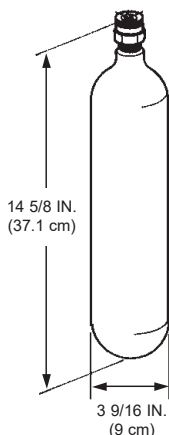


FIGURE 5
000148

24 in. (61 cm) 1/4 in. Stainless Steel Hose

The 24 in. (61 cm) 1/4 in. Stainless Steel Hose, Part No. 32336, can be used to connect the actuation piping from the regulated release to the water tank expellant gas assembly.

The following compression fittings are also available.

Part No. 32338 – 1/4 in. Male Actuation Connector

Part No. 31811 – 1/4 in. Male Actuation Tee

Part No. 31810 – 1/4 in. Male Actuation Elbow

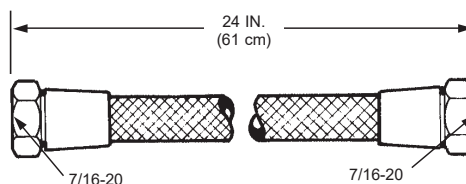


FIGURE 6
000433

10 Ft. Expellant Gas Hose

The 1/4 in. 10 ft. (3.1 m) long rubber Expellant Gas Hose, Part No. 433097, can be utilized between the water tank expellant gas assembly and the water supply tank. This eliminates the need to use rigid 1/4 in. piping between these two components.

Anti-Algae Concentrate

The Anti-Algae Concentrate, Part No. 432656, is used to retard any algae growth within the water storage tank. After tank is filled, add one bottle of anti-algae concentrate to the tank. Add a new bottle at each water tank recharge.

DESIGN

Design Parameters

The Design Parameters chart below indicates the requirements for piping the water line, actuation gas line, expellant gas line, and the elevation mounting requirements between the ANSUL AUTOMAN Self-Contained Regulated Release Assembly, Water Tank Expellant Gas Assembly and the Water Supply Tank. All agent distribution piping is the same as noted for each size PIRANHA domestic water supply system. Refer to Section IV, "Design," for all agent piping requirements. See Figure 7.

PIRANHA-7, 10, and 13 – 40 Gallon (151 L) Tank

Max. 3/4 in. Water Supply Line Length	Max. No. of 3/4 in. Water Supply Line Elbows	Max. 1/4 in. Actuation Gas Line Length	Max. 1/4 in. Expellant Gas Line Length	Max. Elevation Difference Between Bottom of Water Tank and Top of Self- Contained Regulated Release Assembly See Note 1.
50 ft. (15.2 m)	11	50 ft. (15.2 m)	10 ft. (3.1 m)	12 ft. (3.7 m)

Note No.1 – Vertical water supply piping rise can exceed 12 ft. (3.7 m) but the physical vertical distance between the bottom of the water tank and the top of the self-contained regulated release assembly cannot exceed 12 ft. (3.7 m).

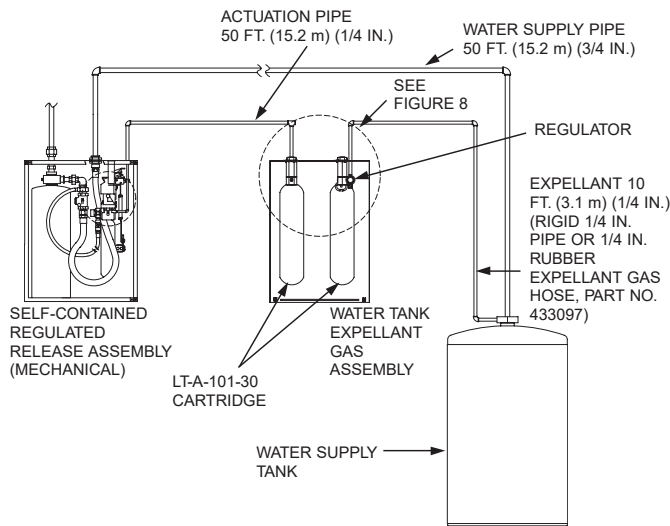


FIGURE 7
006826

INSTALLATION

General Piping Requirements

1. All actuation, and distribution piping requirements are the same as those listed in Section V, "Installation," "General Piping Requirements." Also, install 1/4 in. expellant gas line between water tank expellant gas assembly and the water tank adaptor. See Figure 8 for piping/stainless steel hose options.

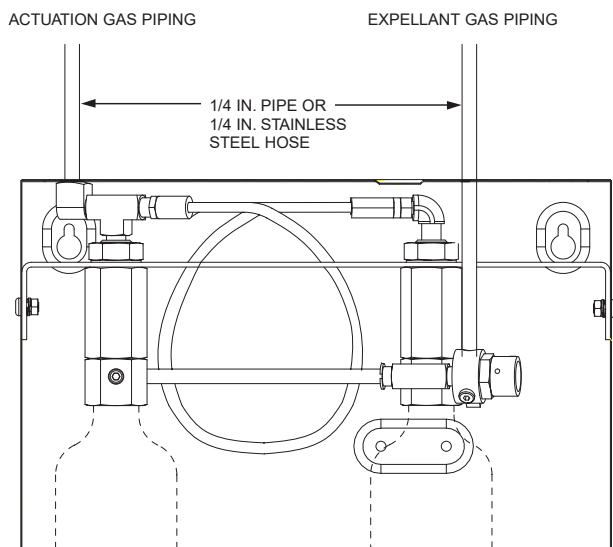


FIGURE 8
006827

2. Water supply piping between the water supply tank and the ANSUL AUTOMAN Self-Contained Regulated Release Assembly must be 3/4 in. Schedule 40 stainless steel pipe and fittings or 3/4 in. galvanized pipe and fittings.
3. Vertical water supply piping rise can exceed 12 ft. (3.7 m) but the physical vertical distance between the bottom of the water tank and the top of the self-contained regulated release assembly cannot exceed 12 ft. (3.7 m).
4. Use of a 3/4 in. pipe union is required at the water supply tank so piping can be removed for tank filling and recharge.

Filling Water Supply Tank

1. After all installation procedures have been completed, remove 3/4 in. supply piping and 1/4 in. expellant gas piping from water supply tank outlet. Remove tank adaptor and pickup tube.
2. Fill tank with clean water. Tank should be filled to 1 in. (2.5 cm) from bottom of tank collar.
3. After filling, add one bottle of anti-algae solution, Part No. 423656, to water in tank. Mix into water with clean long metal rod or wooden stick.
4. Re-install tank adaptor and pickup tube assembly. Tighten securely.
5. Re-install 3/4 in. water supply piping and 1/4 in. expellant gas piping. Tighten securely.

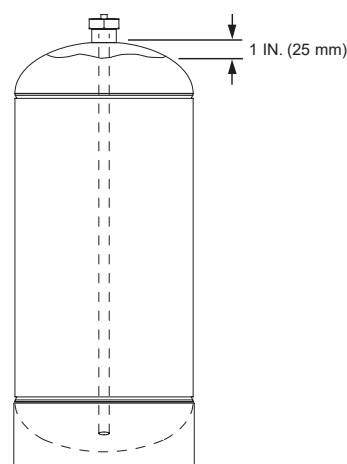


FIGURE 9
006822

Note: Do not install expellant gas cartridges at this time. Install cartridges only after all Testing and Placing in Service Procedures have been completed.

TESTING AND PLACING IN SERVICE

After the system has been completely installed, and **BEFORE INSTALLING THE ACTUATION AND EXPELLANT GAS CARTRIDGES**, the system must be tested at the self-contained regulated release assembly.

Refer to Section VI, "Testing and Placing in Service," and complete all procedures. Exception: It is not necessary to complete the "Pressure Testing The Water System" procedure. This is not appropriate for the self-contained design option.

Installing Actuation Gas Cartridge

After all testing has been completed, install actuation cartridge in self-contained regulated release assembly.

1. Remove shipping cap and weigh cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge.
2. Make certain self-contained regulated release mechanism is cocked and lock bar is installed. Then, install cartridge into release assembly and hand tight.
3. Remove lock bar.
4. Install cover on self-contained regulated release assembly and secure with appropriate fasteners or visual inspection seals, Part No. 197.

Installing Expellant Gas Cartridges

After all testing has been completed, install actuation cartridge in water tank expellant gas assembly.

1. Remove shipping cap and weigh cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge.
2. Install a cartridge into each of the two pneumatic actuators located in the water tank enclosure. Hand tighten.
3. Install cover on water tank expellant gas assembly and secure with appropriate fasteners or visual inspection seals, Part No. 197.

RECHARGE AND RESETTING PROCEDURES

Refer to Section VII, Recharge and Resetting Procedures, and complete Cleanup, Flushing, and Resetting instructions.

Once completed, recharge the self-contained system by completing the following:

1. Fill the PIRANHA tank with 1.5 gallons (5.8 L) PIRANHA-7, 2.25 gallons (8.5 L) PIRANHA-10, or 3.0 gallons (11.6 L) PIRANHA-13 with only PRX Liquid fire Suppressant.

**CAUTION**

Make certain tank is filled to 1 – 1 1/8 in. (25.4-28.6 mm) from bottom of fill opening. During filling, the agent temperature should be 60 °F to 80 °F (16 °C to 27 °C). **DO NOT FILL WITH COLD AGENT. DO NOT OVERFILL.**

2. Replace bursting disc, Part No. 423666, in adaptor assembly. Make certain silver side of disc is away from tank.
3. Replace adaptor/tube assembly and tighten into place. Return and secure tank in regulated release assembly. Reconnect expellant gas hose, water hose, and distribution piping as required.
4. Remove piping and adaptor assembly from water supply tank.
5. Fill tank with clean water to 1 in. (2.5 cm) below collar. Add one bottle of anti-algae solution, Part No. 432656. Mix into water with clean long metal rod or wooden stick.
6. Re-install adaptor and all piping. Tighten securely.
7. Install actuation cartridge in self-contained regulated release assembly by completely the following:
 - a. Remove shipping cap and weigh cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge.
 - b. Make certain self-contained regulated release mechanism is cocked and lock bar is installed. Then, install cartridge into release assembly and hand tight.
 - c. Remove lock bar.
 - d. Install cover on self-contained regulated release assembly and secure with appropriate fasteners or visual inspection seals, Part No. 197.

8. Install actuation cartridge in water tank expellant gas assembly by completing the following:
 - a. Remove shipping cap and weigh cartridge. Replace if weight is 1/2 ounce (14.2 g), or more, below weight stamped on cartridge.
 - b. Install a cartridge into each of the two pneumatic actuators located in the water tank enclosure. Hand tighten.
 - c. Install cover on water tank expellant gas assembly and secure with appropriate fasteners or visual inspection seals, Part No. 197.
9. Record recharge date on tag attached to unit and/or in a permanent file.

SECTION IX – SELF-CONTAINED OPTION

► UL EX. 5174 6-1-04 Page 9-6

MAINTENANCE EXAMINATION

Refer to SECTION VIII – MAINTENANCE EXAMINATION, and complete all appropriate procedures.

Note: At 12 year hydro, tank can be emptied using small water pump. Remove tank adaptor and insert hose into tank to pump out water.

ANSUL INCORPORATED
ONE STANTON STREET
MARINETTE, WI 54143-2542
715-735-7411

Litho in U.S.A.

© 2004 Ansul Incorporated

Part No. 423385-5