

**SEDIMENT TRAP INSTALLATION**  
**2025 California Codes**

**FUEL GAS PIPING**

rigid piping by the use of swivel joints or couplings, the swivel joints or couplings shall be suitable for the service required, and only the minimum number required shall be installed. [NFPA 54:9.6.4.2]

**1212.5.2 Metal Flexible Connectors.** Where industrial appliances subject to vibration are connected to the building piping system by the use of all metal flexible connectors, the connectors shall be suitable for the service required. [NFPA 54:9.6.4.3]

**1212.5.3 Flexible Connectors.** Where flexible connections are used, they shall be of the minimum practical length and shall not extend from one room to another or pass through any walls, partitions, ceilings, or floors. Flexible connections shall not be used in any concealed location. They shall be protected against physical or thermal damage and shall be provided with gas shutoff valves in readily accessible locations in rigid piping upstream from the flexible connections. [NFPA 54:9.6.4.4]

**1212.6 Appliance Shutoff Valves and Connections.** Each appliance connected to a piping system shall have an accessible, approved manual shutoff valve with a nondisplaceable valve member, or a listed gas convenience outlet. Appliance shutoff valves and convenience outlets shall serve a single appliance only. [NFPA 54:9.6.5] The shutoff valve shall be located within 6 feet (1829 mm) of the appliance it serves. [NFPA 54:9.6.5.1] Where a connector is used, the valve shall be installed upstream of the connector. A union or flanged connection shall be provided downstream from the valve to permit removal of appliance controls. [NFPA 54:9.6.5.1(A)]

**Exceptions:**

- (1) Shutoff valves serving decorative appliances in a fireplace shall not be located within the fireplace firebox except where the valve is listed for such use. [NFPA 54:9.6.5.1(B)]
- (2) Shutoff valves shall be permitted to be accessibly located inside wall heaters and wall furnaces listed for recessed installation where necessary maintenance is performed without removal of the shutoff valve.

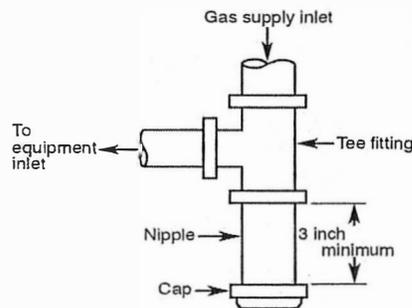
**1212.7 Quick-Disconnect Devices.** Quick-disconnect devices used to connect appliances to the building piping shall be listed to CSA Z21.41. Where installed indoors, an approved manual shutoff valve with a non-displaceable valve member shall be installed upstream of the quick-disconnect device. [NFPA 54:9.6.6.1 – 9.6.6.2]

**1212.8 Gas Convenience Outlets.** Appliances shall be permitted to be connected to the building piping by means of a listed gas convenience outlet, in conjunction with a listed appliance connector, installed in accordance with the manufacturer's installation instructions.

Gas convenience outlets shall be listed in accordance with CSA Z21.90 and installed in accordance with the manufacturer's installation instructions. [NFPA 54:9.6.7]

**1212.9 Sediment Trap.** Where a sediment trap is not incorporated as a part of the appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close

to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated in Figure 1212.9, or another device recognized as an effective sediment trap. Illuminating appliances, gas ranges, clothes dryers, decorative appliances for installation in vented fireplaces, gas fireplaces, and outdoor cooking appliances shall not be required to be so equipped. [NFPA 54:9.6.8]



For SI units: 1 inch = 25.4 mm

**FIGURE 1212.9**  
**METHOD OF INSTALLING A TEE FITTING SEDIMENT TRAP**  
**[NFPA 54: FIGURE 9.6.8]**

**1212.10 Installation of Piping.** Piping shall be installed in a manner not to interfere with inspection, maintenance, or servicing of the appliances. [NFPA 54:9.6.9]

**1212.11 Liquefied Petroleum Gas Facilities and Piping.** Liquefied petroleum gas facilities shall be in accordance with NFPA 58.

**1213.0 Pressure Testing, Inspection, and Purging.**

**1213.1 Piping Installations.** Prior to acceptance and initial operation, all piping installations shall be visually inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. [NFPA 54:8.1.1.1]

**1213.1.1 Inspection Requirements.** Inspection shall consist of visual examination, during or after manufacture, fabrication, assembly, or pressure tests. [NFPA 54:8.1.1.2]

**1213.1.2 Repairs and Additions.** Where repairs or additions are made following the pressure test, the affected piping shall be tested. Minor repairs and additions are not required to be pressure tested, provided that the work is inspected and connections are tested with a noncorrosive leak-detecting fluid or other leak-detecting methods approved by the Authority Having Jurisdiction. [NFPA 54:8.1.1.3]

**1213.1.3 New Branches.** Where new branches are installed to new appliance(s), only the newly installed branch(es) shall be required to be pressure tested. Connections between the new piping and the existing piping

## FUEL GAS PIPING

- (2) This connection shall be made only in the outdoor area where the appliance is to be used. [NFPA 54:9.6.2(2)]
- (3) The connector length shall not exceed 15 feet (4572 mm).

**1312.4 Injection (Bunsen) Burners.** Injection (Bunsen) burners used in laboratories and educational facilities shall be permitted to be connected to the gas supply by an unlisted hose. [NFPA 54:9.6.3]

**1312.5 Connection of Portable and Mobile Industrial Appliances.** Where portable industrial appliances or appliances requiring mobility or subject to vibration are connected to the building gas piping system by the use of a flexible hose, the hose shall be suitable and safe for the conditions under which it can be used. [NFPA 54:9.6.4.1]

**1312.5.1 Swivel Joints or Couplings.** Where industrial appliances requiring mobility are connected to the rigid piping by the use of swivel joints or couplings, the swivel joints or couplings shall be suitable for the service required and only the minimum number required shall be installed. [NFPA 54:9.6.4.2]

**1312.5.2 Metal Flexible Connectors.** Where industrial appliances subject to vibration are connected to the building piping system by the use of all metal flexible connectors, the connectors shall be suitable for the service required. [NFPA 54:9.6.4.3]

**1312.5.3 Flexible Connectors.** Where flexible connections are used, they shall be of the minimum practical length and shall not extend from one room to another or pass through any walls, partitions, ceilings, or floors. Flexible connections shall not be used in any concealed location. They shall be protected against physical or thermal damage and shall be provided with gas shutoff valves in readily accessible locations in rigid piping upstream from the flexible connections. [NFPA 54:9.6.4.4]

**1312.6 Appliance Shutoff Valves and Connections.** Each appliance connected to a piping system shall have an accessible, approved manual shutoff valve with a nondisplaceable valve member, or a listed gas convenience outlet. Appliance shutoff valves and convenience outlets shall serve a single appliance only. [NFPA 54:9.6.5] The shutoff valve shall be located within 6 feet (1829 mm) of the appliance it serves. [NFPA 54:9.6.5.1] Where a connector is used, the valve shall be installed upstream of the connector. A union or flanged connection shall be provided downstream from the valve to permit removal of appliance controls. [NFPA 54:9.6.5.1(A)]

### Exceptions:

- (1) Shutoff valves serving decorative appliances in a fireplace shall not be located within the fireplace firebox except where the valve is listed for such use. [NFPA 54:9.6.5.1(B)]
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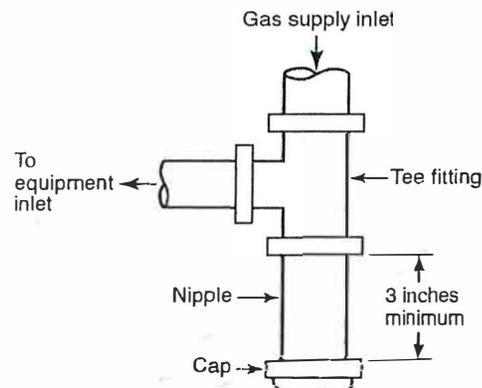
**1312.7 Quick-Disconnect Devices.** Quick-disconnect devices used to connect appliances to the building piping shall be listed to CSA Z21.41. Where installed indoors, an

approved manual shutoff valve with a nondisplaceable valve member shall be installed upstream of the quick-disconnect device. [NFPA 54:9.6.6 – 9.6.6.2]

**1312.8 Gas Convenience Outlets.** Appliances shall be permitted to be connected to the building piping by means of a listed gas convenience outlet, in conjunction with a listed appliance connector, installed in accordance with the manufacturer's installation instructions.

Gas convenience outlets shall be listed in accordance with CSA Z21.90 and installed in accordance with the manufacturer's installation instructions. [NFPA 54:9.6.7]

**1312.9 Sediment Trap.** Where a sediment trap is not incorporated as a part of the appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated in Figure 1312.9, or another device recognized as an effective sediment trap. Illuminating appliances, gas ranges, clothes dryers, decorative appliances for installation in vented fireplaces, gas fireplaces, and outdoor cooking appliances shall not be required to be so equipped. [NFPA 54:9.6.8]



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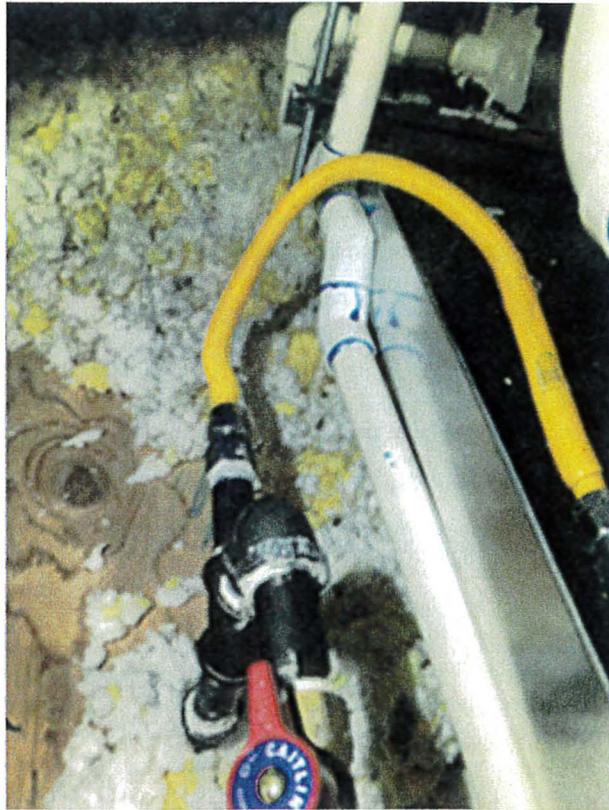
**FIGURE 1312.9**  
METHOD OF INSTALLING A TEE FITTING SEDIMENT TRAP  
[NFPA 54: FIGURE 9.6.8]

**1312.10 Installation of Piping.** Piping shall be installed in a manner not to interfere with inspection, maintenance, or servicing of the appliances. [NFPA 54:9.6.9]

**1312.11 Liquefied Petroleum Gas Facilities and Piping.** Liquefied petroleum gas facilities shall comply with NFPA 58.

**1313.0 Pressure Testing, Inspection, and Purging.**

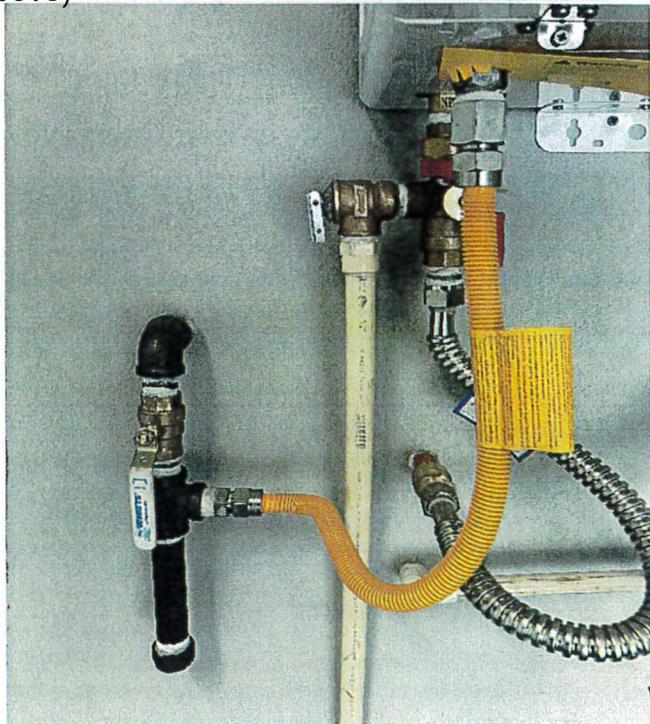
**1313.1 Piping Installations.** Prior to acceptance and initial operation, all piping installations shall be visually



Please install so gas pressure is aimed down at sediment trap (3-inch nipple minimum)

Pull from center of tee with flex line or hard pipe to HVAC unit or water heater

The figure in the 2025 CPC & CMC code sections is considered code (see code sections above)



reducer or adapter from cast-iron drainage pipe to iron pipe size (IPS) pipe.

### 317.0 Food-Handling Establishments.

**317.1 General.** Food or drink shall not be stored, prepared, or displayed beneath soil or drain pipes unless those areas are protected against leakage or condensation from such pipes reaching the food or drink as described below. Where building design requires that soil or drain pipes be located over such areas, the installation shall be made with the least possible number of joints and shall be installed to connect to the nearest adequately sized vertical stack with the provisions as follows:

- (1) Openings through floors over such areas shall be sealed watertight to the floor construction.
- (2) Floor and shower drains installed above such areas shall be equipped with integral seepage pans.
- (3) Soil or drain pipes shall be of an approved material as listed in Chapter 17 and Section 701.2. Materials shall comply with established standards. Cleanouts shall be extended through the floor construction above.
- (4) Piping subject to operation at temperatures that will form condensation on the exterior of the pipe shall be thermally insulated.
- (5) Where pipes are installed in ceilings above such areas, the ceiling shall be of the removable type or shall be provided with access panels to form a ready access for inspection of piping.

### 318.0 Test Gauges.

**318.1 General.** Tests in accordance with this code, which are performed utilizing dial gauges, shall be limited to gauges having the following pressure graduations or incrementations.

**318.2 Pressure Tests (10 psi or less).** Required pressure tests of 10 pounds-force per square inch (psi) (69 kPa) or less shall be performed with gauges of 0.10 psi (0.69 kPa) incrementation or less.

**318.3 Pressure Tests (greater than 10 psi to 100 psi).** Required pressure tests exceeding 10 psi (69 kPa) but less than or equal to 100 psi (689 kPa) shall be performed with gauges of 1 psi (7 kPa) incrementation or less.

**318.4 Pressure Tests (exceeding 100 psi).** Required pressure tests exceeding 100 psi (689 kPa) shall be performed with gauges incremented for 2 percent or less of the required test pressure.

**318.5 Pressure Range.** Test gauges shall have a pressure range not exceeding twice the test pressure applied.

### 319.0 [Not permitted for OSHPD 1, 2, 3, 4 & 5] Medical Gas and Vacuum Systems.

**319.1 General.** Such piping shall be in accordance with the requirements of Chapter 13. The Authority Having Jurisdiction shall require evidence of the competency of the installers and verifiers.

### 320.0 Rehabilitation of Piping Systems.

**320.1 General.** Where pressure piping systems are rehabilitated using an epoxy lining system, it shall be in accordance with ASTM F2831.

**321.0 Essential Plumbing Provisions. [OSHPD 1, 2, 3 (Surgical Clinics), 4 & 5]** During periods of power outages essential electrical power shall be provided for the following equipment:

- (1) Domestic water booster pumps.
- (2) Domestic hot water circulating pumps.
- (3) Sewage ejector pumps.
- (4) Sump pumps and drainage pumps.
- (5) Domestic water heating equipment and their controls.
- (6) Fuel pumps.
- (7) Grease removal devices requiring electrical power.

**322.0 Psychiatric Services [OSHPD 1, 2, 4 & 5].** For projects associated with provision of psychiatric services in acute psychiatric hospitals, general acute care hospitals, and special treatment program service units in skilled nursing facilities, special design considerations for injury and suicide prevention shall be given to shower, bath, toilet, and sink plumbing fixtures. Shower heads shall be of flush-mounted design to minimize anchor points.

**323.0 Plumbing Equipment Schedules. [OSHPD 1, 2, 3, 4 & 5]** Plumbing equipment schedules shall clearly indicate which equipment will be on essential power or appropriate special seismic certifications.

