

**Report Date:** 04 Apr 2014

**Summary Report for Individual Task  
052-12K-1060  
Repair A Cross-Linked Polyethylene (PEX) Tubing System  
Status: Approved**

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DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

**Condition:** Given a mission to repair a PEX tubing system, PEX tubing, PEX fittings, pipe-fitters tool kit 1/8 to 2 inch, carpenters tool kit squad level, special tools, goggles/safety glasses, gloves and appropriate doctrine. This task should not be trained in MOPP 4.

**Standard:** Repair a PEX tubing system so that the damaged section does not leak when pressure tested IAW appropriate doctrine, without causing damage to the environment or equipment and without causing injury to personnel.

**Special Condition:** None

**Safety Level:** Low

**MOPP:** Never

<b>Task Statements</b>
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**Cue:** Soldier has been given a mission to repair a PEX tubing system.

<b>DANGER</b>
An extreme danger of electrocution exist when working with A/C power in damp or wet conditions. Consider using DC (battery power) lights and tools when working under these conditions.

<b>WARNING</b>
None

<b>CAUTION</b>
None

**Remarks:** None

**Notes:** None

## Performance Steps

1. Locate the damaged section of PEX that needs repaired.
2. Shut off the water at the nearest valve before the leak.
3. Cut the damaged section of PEX draining it into a catch container.
4. Repair the damaged section of PEX.
  - a. Repair a damaged PEX connection (AT THE FITTING).
    - (1) Cut the tubing near the end of the fitting at a 90 degree angle.
    - (2) Cut the crimp ring using the crimp ring removal tool.
    - (3) Remove crimp ring and tube from fitting.
    - (4) Slide a new crimp ring at least two inches from the end over the PEX.
    - (5) Push into place the clean cut end of the PEX onto the fitting.
    - (6) Slide the crimp ring over the end of the tube and fitting until it is aligned over both the PEX tubing and fitting.
    - (7) Crimp the crimp ring with a PEX crimper securing the PEX tubing onto the fitting.
    - (8) Verify connection with the Go/No Go gauge.
  - b. Repair the damaged section of PEX (IN THE LINE).
    - (1) Cut on each side of the damaged section of PEX tubing on a 90° angle and discard the section.
    - (2) Slide a crimp ring at least two inches from the end over each good end of the PEX.
    - (3) Push the clean cut ends of the PEX onto a nipple or compression fitting.
    - (4) Slide the crimp rings over the ends of the tube and fitting until it is aligned over both the PEX tubing and fitting.
    - (5) Crimp the rings with a PEX crimper securing the PEX tubing onto the fitting.
    - (6) Verify connection with the Go/No Go gauge.
5. Test the system after all required repairs and connections have been made.

Note: Inspecting for leaks is important. A leaky joint wastes water and causes costly damage to the building. In new construction, test the entire system for leaks before the floor and partitions are closed up. When performing this test, use the water pressure from the main that feeds the system. While the system is under pressure, inspect each joint for moisture. If a leak is detected in a joint, tighten the joint or replace it by cutting the pipe and connecting a new section with a union. When working with copper soldered joints or plastic solvent-cement joints, drain the pipe and then connect the joint. Copper compression joints can be tightened or replaced.

  - a. Resume water flow to the repaired section of PEX.
  - b. Ensure all air is bled from the repaired section by leaving valves open until water flow is constant and without air pockets, closing all valves after line is bled.

c. Check repaired section for leaks.

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show him how to do it correctly.

**Evaluation Preparation:** Setup: Provide the soldier with the items listed in the conditions. Brief soldier: Tell the soldier that he will be required to complete the performance measures according to the standards set forth in the task.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Located the damaged section of PEX that needed repaired.			
2. Shut off the water at the nearest valve below the leak.			
3. Drained the section of plumbing that was to be repaired.			
4. Repaired the damaged section of PEX.			
5. Tested the system after all required repairs and connections have been made.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
	TM 3-34.70	Plumbing, Pipe Fitting, and Sewerage	No	Yes

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :**

Task Number	Title	Proponent	Status
052-248-1000	Maintain Plumbing Tools	052 - Engineer (Individual)	Approved

**Supported Individual Tasks :** None

**Supported Collective Tasks :** None

**ICTL Data :**

ICTL Title	Personnel Type	MOS Data
12K10, Plumber, Skill Level 1	Enlisted	MOS: 12K, Skill Level: SL1, Duty Pos: KFW