

Knowledge Domain: Plumbing
Unit: Leaking
Skill: Rubber patches

Tools and Parts Required:

- 1) Rubber tubing
- 2) Rubber patch kit
- 3) Liquid soap

Introduction

You can use patches to repair holes in tubing. Patches extend the life of tubing. You can use rubber cement to patch rubber tubing. Rubber cement is a flexible adhesive. Rubber cement can be removed easily. Rubber cement is packaged in a tube. Rubber cement dries in two or more hours. Most bike stores sell rubber patches and rubber cement. You can use excess tubing to create a patch.



Rubber patch kits include patches, a tube of rubber cement, and sand paper.

Example

Below is a picture of rubber tubing with rubber cement on it. Rubber cement becomes cloudy while it dries. The second picture shows rubber tubing and a patch after the patch is applied. Do not touch the patch again after application.



Rubber cement on rubber tubing



Rubber tubing after a patch is applied

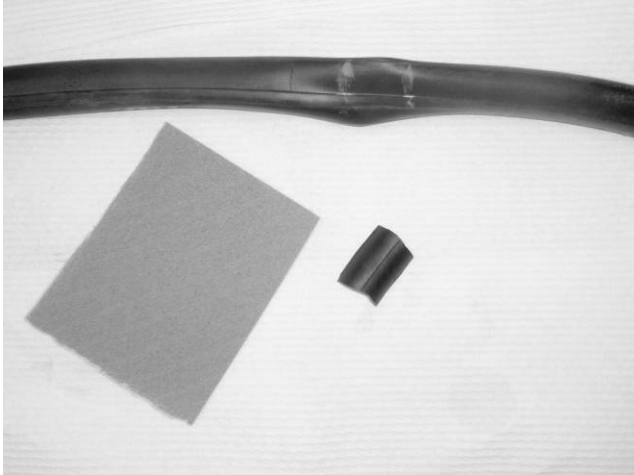
Identification and Diagnosis

Leaks in tubing prevent machines from operating correctly. Holes in the tubing waste energy. Use the BTA skill *Plumbing-Leaking-Finding Holes* to find holes in the tubing. Use only rubber cement and rubber patches to repair rubber tubing. Ensure the tubing is rubber.

Procedure

Locate the hole. Use chalk or a marker to mark the location of the hole on the tube. Use sand paper to roughen the surface of the tubing around the hole. Check the back of the patch for adhesive. If there is no adhesive, use the sand paper to roughen the surface of the patch. Do not sand patches with pre-applied adhesive.

Apply a thin layer of rubber cement if the patch does not have adhesive. Wait 10 minutes for the cement to dry. If there is already adhesive, do not apply adhesive to the patch. Apply a thin layer of rubber cement on the tubing around the hole. Press the rubber patch onto the rubber cement. Push the patch down firmly for 60 seconds. Let the cement dry for two or more hours. Inflate the tube. Check for leaks.



Rubber tubing, sandpaper and a rubber patch

Always use rubber cement in a ventilated area. Do not inhale the rubber cement vapors. Do not use rubber cement near fire.

Exercise

Your instructor will provide a patch and rubber tubing with a hole. Locate the hole. Patch the hole. Inflate the tube, and check the tube for leaks.

Your instructor will verify your work before you continue.

Preventative Maintenance and Calibration

Patching extends the life of tubing. Check tubing regularly for holes and leaks. Sometimes the tube has many holes. If necessary, replace the entire tube.

Always calibrate every medical device before returning it to use.