

# **Auto Extrication - Hand Tools**

## **Instructor Guide**

**Course:** Auto Extrication - Hand Tools

**Session Reference:** 1

**Topic:** Use of Hand Tools in Auto Extrication

**Level of Instruction:**

**Time Required:** 3 hours

**Materials:**

- 1 vehicle per 6 students (entry through body of vehicle by one method)  
*NOTE:* 3 vehicles will be needed if practicing entry with vehicle on side, roof flapping, and roof removal
- Hand tools to include: Halligan bar, pick head axe, spring loaded center punch, pry axe, pike pole, Glas Mastr saw, cribbing, hi-lift jacks, hack saw, lock joc, slim jim, K bar, panel cutters, screwdrivers, cold chisel

**Reference:**

- Rescue Technician Student Manual, Maryland Fire and Rescue Institute

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### **PREPARATION:**

**Motivation:**

**Objective (SPO) 1-1:**

The student will demonstrate basic techniques using hand tools to extricate an entrapped victim through class participation.

**Overview:**

#### **Review of Extrication Techniques Using Hand Tools**

- Gaining Access Through Windows
- Gaining Access Through Doors
- Gaining Access Through the Body of a Vehicle

### **Review of Extrication Techniques Using Hand Tools**

- SPO 1-1 The student will demonstrate gaining access to entrapped victims.
- EO 1-1 Demonstrate gaining access to entrapped victims through doors.
- EO 1-2 Demonstrate gaining access to entrapped victims through windows.
- EO 1-3 Demonstrate gaining access to entrapped victims through the body of a vehicle.

The Hand Tool Extrication course is designed for individuals who are responsible for gaining access to victims at the scene of an accident. The students should have a basic understanding of stabilization techniques and should be involved in hands on practical rather than lecture.

**I. Gaining Access Through Doors (1-1)**

- A. Ensure vehicle is stabilized with cribbing
- B. Should be considered as first access point
- C. Undamaged doors
  - 1. Open in normal manner if unlocked
  - 2. Ask victim to unlock and open from inside
  - 3. Utilize locksmith's tool if available
    - a. Lock Jc
    - b. Slim Jims
    - c. Other available
- D. Jammed doors
  - 1. Locking mechanism should be released prior to attempting forcible entry
    - a. Insert halligan between door handle and body
    - b. Pull tool sharply down so locking mechanism and handle are broken and pulled away
    - c. Locks operating rod should be exposed and can be tripped with screwdriver or needle nose pliers
  - 2. Vehicles from 1973 on will have Nader pins and require hydraulic, mechanical tools, or saws
  - 3. Insert flat edge of prying tool or lever at the mid-point of the door. Use pillar as fulcrum and continue to widen gap between pillar and door

**II. Gaining Access Through Windows (1-2)**

- A. Removal of windshields and rear windows
  - 1. Made of laminated glass
  - 2. Breaking windshields
    - a. Protect victim
    - b. Using axe, drive axe into upper midpoint of windshield. cut across top from corner to corner, chop downward to lower corner on both sides, cut across bottom from corner to corner
    - c. Using Glas Mastr, make purchase point, force tool through, insert saw, pull to cut glass, remove entire windshield
  - 3. Breaking side windows - tempered glass
    - a. Sharper tools result in less glass dispersion
    - b. Place spring loaded center punch, or a punch, in lower corner closest to B/C posts.

**III. Gaining Access Through Vehicle Body (1-3)**

- A. Vehicle on side
  - 1. Stabilize vehicle
  - 2. Make a three sided cut starting at the top, then cutting behind A post and in front of C post.
  - 3. Fold down sheet metal exposing roof supports and headliner.
  - 4. Cut headliner with sharp knife
  - 5. Break roof supports from spot welds with hammer.
  - 6. Cut roof in same manner as sheet metal
    - a. Makeshift can opener or K Bar
    - b. Schild panel cutters and improvised leaf spring cutter struck by sledge hammer
    - c. Screwdriver/cold chisel with sledge
- B. Vehicle on Wheels - Roof Access/Flapping

1. Stabilize vehicle
2. Cut "A" posts, then "B" posts
3. Cut roof in front of "C" posts through roof rail
4. Lay bar (pike pole or back board on its edge) between "C" post cuts
5. Flap roof

C. Vehicle on Wheels - Roof Removal

1. Stabilize vehicle
2. Cut shoulder belts
3. Cut "A" posts, then "B" posts, then "C" posts
4. Lift high and remove from vehicle

D. Dash roll-up maneuver

1. Make relief cuts 5 to 6" above intersection of the "A" post rocker panel, and 8 to 10" back on horizontal rocker panel
2. Insert/attach hi-lift jacks on both sides and push upwards with the base on the door jams and the head on the "A" post near windshield area
3. Wedge/block relief cuts as necessary

**SUMMARY:**

**Review:**

Review of Extrication Techniques Using Hand Tools

- Gaining Access Through Windows
- Gaining Access Through Doors
- Gaining Access Through the Body of a Vehicle

**Remotivation:**

**Assignment:**

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**Evaluation:**