

Vehicle Extrication

Skills Exercise 1: Vehicle Stabilization

Vehicle Stabilization

Activity: Related to Topic 2-4: Stabilizing a Common Passenger Vehicle

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to stabilize a common passenger vehicle resting on its wheels, its side, and its roof.

Materials

- One vehicle minimum (three recommended)
 - Remove batteries before use
- Standard size cribbing and wedges
- Wheel chocks
- Step chocks
- Chain
- Ratchet straps
- Come-along
- Manufactured strut system (4 struts minimum + accessories)
- Utility rope
- Lumber
- Ladder
- Hand tools
- Appropriate PPE (including hand and eye protection)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following stabilization skills:

1. Stabilize a wheel-resting vehicle using:
 - a. Wheel chocks
 - b. Cribbing (cribbing, wedges, and step chocks)
 - c. Marrying
 - d. Available resources (improvise)

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Skills Exercise 1: Vehicle Stabilization

2. Stabilize a side-resting vehicle using:
 - a. Cribbing (cribbing, wedges, and step chocks)
 - b. Single strut
 - c. Two struts
 - d. Three struts
 - e. Four struts
 - f. Available resources (improvise)

3. Stabilize a roof-resting vehicle using:
 - a. Cribbing (cribbing, wedges, and step chocks)
 - b. Marrying
 - c. Two struts
 - d. Two struts + chain sling
 - e. Three struts
 - f. Four struts

4. Stabilize a vehicle improvising with available resources

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Skills Exercise 2: Hand Tools (optional)

Hand Tools

Activity: Related to Topics 2-5 through 2-9

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Instructor Note

Use this optional skills exercise if students lack familiarity with hand and power tools. If students already have strong tool skills, this training can be carried out during the mandatory skills exercises.

Description

This exercise measures a firefighter's ability to safely and effectively manipulate hand and power tools commonly used during vehicle extrication incidents.

Materials

- One vehicle (minimum)
 - Remove batteries before use
- High-lift jack
- Bottle jack
- Come-along
- Chains
- Ratchet strap
- Air chisel
- Reciprocating saw
- Rotary saw
- Flathead axe
- Halligan bar
- Cable cutter
- Appropriate PPE (including hand, ear, and eye protection and dust masks)
- Additional tools identified by instructor requiring additional training
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following tool manipulation skills:

1. Use hand tools commonly associated with vehicle extrication incidents
2. Use power tools commonly associated with vehicle extrication incidents

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Skills Exercise 3: Energy Sources

Energy Sources

Activity: Related to Topic 2-5: Isolating and Managing Energy Sources

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to isolate and manage potentially harmful energy sources.

Materials

- One stabilized vehicle (minimum)
 - Remove batteries before use
- Hand tools
- Appropriate PPE (including hand and eye protection)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following energy isolation and management skills:

1. Simulate isolating a vehicle's 12-volt system
2. Identify airbag locations within a vehicle with a visual inspection
3. Identify energy hazards within a vehicle using the "peel and peek" method

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Skills Exercise 4: Access and Egress

Access and Egress

Activity: Related to Topic 2-6: Determining Passenger Vehicle Access and Egress Points, and Topic 2-7: Creating Access and Egress Openings for Rescue

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to create access and egress openings for rescue from a common passenger vehicle.

Materials

- One stabilized four-door vehicle (minimum)
 - Remove batteries before use
- One stabilized two-door vehicle (minimum)
 - Remove batteries before use
- Cutters
- Spreaders
- Hand tools
- Power tools
- Appropriate PPE (including hand, ear, and eye protection, and dust mask)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following access and egress skills:

1. Identify existing access points with a visual inspection
2. Create access and/or egress by opening a single door
3. Create access and/or egress by removing a single door
4. Create access and/or egress by complete side removal on a four-door vehicle (B pillar/post blow out)
5. Create access and/or egress by cutting an opening behind the B pillar/post of a two-door vehicle (3rd door conversion)
6. Create access and/or egress by removing a portion of a roof (roof flap)
7. Create access and/or egress by removing the roof of a vehicle
8. Create access and/or egress by removing vehicle glass
9. Create or use existing access and/or egress through the trunk of a vehicle manually or using appropriate tools

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Skills Exercise 5: Disentangling Victims

Disentangling Victims

Activity: Related to Topic 5-8: Disentangling Victims

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to disentangle victims from a common passenger vehicle, protecting victims and preventing further injury.

Materials

- Two stabilized vehicles (minimum)
 - Remove batteries before use
- Two rescue mannequins (minimum)
- Cutters
- Spreaders
- Ram
- Cribbing
- Come-along
- Hand tools
- Power tools
- Lifting tools
- Victim protection blanket
- Appropriate PPE (including hand, ear, and eye protection)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following victim disentanglement skills:

1. Displace vehicle dashboard by rolling the dash
2. Displace vehicle dashboard by lifting the dash
3. Displace vehicle dashboard by jacking the dash
4. Displace vehicle steering wheel
5. Displace vehicle pedals
6. Remove vehicle pedals
7. Displace vehicle seat
8. Remove vehicle seat
9. Lift a vehicle off an entrapped victim

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Skills Exercise 6: Victim Packaging and Removal

Victim Packaging and Removal

Activity: Related to Topic 5-9: Removing a Packaged Victim to a Safe Area

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to remove a packaged victim to a designated safe area as a member of a team, protecting victims and preventing further injury.

Materials

- One stabilized and disentangled vehicle (minimum)
 - Remove batteries before use
- One live "victim" (a student or instructor)
- Victim immobilization equipment
- Appropriate PPE (including hand and eye protection)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following victim removal and packaging skills:

1. Immobilize and remove a live "victim" from the driver or front passenger seat of a disentangled vehicle
2. Immobilize and remove a live "victim" from any non-front seat of a disentangled vehicle

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Skills Exercise 7: Vehicle Extrication Scenarios

Vehicle Extrication Scenarios

Activity: A comprehensive exercise that incorporates skills from all course topics

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 14:30 hours for skills practice and completion)

Description

This exercise measures a firefighter's ability to extricate a victim entrapped in a common passenger vehicle, stabilizing the vehicle, disentangling the victim without further injury, and managing hazards, as a member of a team.

Materials

- Multiple vehicles
 - Remove batteries before use
- Mannequins
- Planning and ICS forms
- Hand tools
- Power tools
- Fire extinguisher
- Extrication tools
- Stabilization equipment
- Victim immobilization equipment
- Lifting equipment
- Other supplies and equipment as identified by instructor
- Appropriate PPE (including hand, ear and eye protection and dust masks)
- Fire extinguisher

Instructions

Working in groups, students will demonstrate the following victim extrication skills:

1. Size up the incident
2. Establish scene safety zones
3. Establish fire protection
4. Stabilize vehicle
5. Isolate and manage energy sources
6. Create access and egress points
7. Disentangle victim(s)
8. Remove packaged victim(s) to a safe area
9. Terminate incident