

RESCUE & EXTRICATION		TROY FIRE DEPT. TACTICAL PLAN 203.01	
<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 1 of 7</i>

SCOPE

This plan will outline basic operational procedures to be followed when the Fire Department operates at incidents requiring extrication. While this plan is oriented to vehicle rescue, these guidelines can be applied to other extrication situations such as machinery entrapment.

RESPONSE READINESS

Due to the multitude of extrication situations that have been encountered, the Fire Department has acquired an assortment of equipment that can be used to accomplish the various tasks required at extrication scenes. In order for this equipment to be effective, it must be maintained in a state of constant readiness.

INCIDENT RESPONSE

When alerted to respond to an incident requiring extrication, personnel shall plan their response based on the following factors:

- Type of incident: extrication only, extrication and fuel spill, fire, hazardous materials?
- Location of incident: intersection; expressway-northbound or southbound?
- Responding units shall stay alert for additional information from arriving Police, EMS or Fire units. Traffic and/or weather conditions may require responding units to alter their response plan.
- Potential hazards: hazardous materials, electric wires, leaking fuel?

ARRIVAL AT AN INCIDENT

When arriving at the scene, apparatus shall be located to provide access for firefighting and extrication equipment. When placing apparatus, wind direction, slope of terrain, protection of personnel, presence of energized overhead wires and/or other hazards shall be considered. The apparatus should be close enough to access the equipment adequately, and far enough away so that engine noise and exhaust fumes are minimized in the extrication area. Apparatus and personal vehicles shall be staged as described in Tactical Plan 208.12 (Emergency Scene Traffic Management)

SIZE-UP

The first arriving unit shall perform an initial size-up of the situation and report this over the radio to Dispatch. A further size-up shall include surveying the scene for number and condition of patients; awareness of potential hazards; coordination with EMS for patient removal priority and method; and coordination with PD for traffic concerns and resource placement.

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 2 of 7</i>

ESTABLISHING COMMAND

The Incident Commander (IC) shall formally establish Command and perform an on-going size-up of the situation throughout the incident. This shall include any further coordination with EMS and PD, the need for additional resources, safety of first responders, and appropriate radio updates to Dispatch.

In the event there are multiple victims in multiple vehicles in need of extrication, the IC shall determine if additional resources will be required and if so, request the incident be upgraded to a Box Alarm through Dispatch.

Some incidents may require specialized resources such as Rescue 4, a large tow truck, or equipment from DPW, etc. When his situation occurs, the IC shall make a special request for the particular resource(s) through Dispatch.

ASSIGNMENTS AND DUTIES

Incident Commander

- Performs a 360 degree survey of the scene to determine if any hazards may be in the area.
- Coordinates with EMS in order to determine the desired method for freeing victim(s).
 - EMS should have of an idea as to what path will do the least harm based on their patient assessment.
- Develops an Incident Action Plan (Plan "A") and backup plan (Plan "B") and communicates the plans to the Extrication Leader for implementation.
- Performs an on-going size-up and provides appropriate updates to Dispatch.

Extrication Leader (Officer whenever possible)

- Oversees the extrication crew.
- Oversees all aspects of the extrication.
- Implements the Incident Action Plan (Plan "A") and monitors its progress.
- Implements the alternate IAP (Plan "B") as required.
 - Informs the IC when modifications are made.
- Does not typically perform hands-on work – supervises.

Extrication Crew

- Consists of a Crew Leader (an officer whenever possible) and appropriate number of firefighters
- Does the hands-on work of the extrication, carrying out the IAP
- Follows direction from the Extrication Leader

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 3 of 7</i>

Hazard Control Crew

- Responsible for abating all hazards, i.e., fire, fuel spill, etc.
- Make sure that a hose line is pulled, charged and manned
- Crew is made up of a Crew Leader (officer when possible) and firefighters
- Hazard Control Crew Leader works in conjunction with the Extrication Leader and the I.C.

Staging (Support Crew)

- Responsible for the readiness of equipment that will be used or may be used
- Makes sure the equipment is removed from the truck and placed on a tarp near the incident
- Provides lighting at incidents when required
- The Staging Leader (officer when possible) is responsible for providing the equipment requested by the Extrication Leader or the I.C.
- Responsible for looking up information on the computer for any hazards that may be unique to the vehicle.
- Assist EMS as requested (medically trained fire personnel should be used if available)
- Responsible for a staging area for unassigned personnel

Safety Officer

- Responsible for the overall safety of the scene
- Reports to the I.C.

OPERATIONAL CONSIDERATIONS

Operations at incidents requiring extrication have common objectives. These objectives can be summarized as follows:

Controlling Hazards

- **Fire** – Fire must be controlled and/or extinguished to protect the extrication operations. Adequate personnel, hose line (minimum 1 3/4"), and water supply must be deployed. Fire personnel assigned to this area shall be in full protective clothing with SCBA. Masks should be worn, but the breathing tube need not be attached until SCBA is utilized.
- **Spilled Fuel** – Fuel leaks and spills must be controlled to prevent ignition. Leak plugging, absorption, treatment with neutralizing agents, and foam application can be employed to mitigate the hazard.

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 4 of 7</i>

- **Energized Electrical Wires** – The scene shall be surveyed to identify any downed electrical wires or underground electrical facilities. If electrical hazards are located they shall be identified to prevent personnel from coming in contact with them. Care should be exercised prior to touching vehicles to determine if they are energized.
- **Traffic** – Traffic control is the responsibility of the Police Department. The Incident Commander shall coordinate with the Police Department regarding closing of roadways and/or rerouting of traffic. When fire apparatus and personnel are positioned in the roadway, sufficient lanes shall be blocked to provide a safe working area around vehicles and apparatus (see Tac Plan 208.12).
- **Crowd Control** – Crowd control is the responsibility of the Police Department. The Incident Commander shall coordinate with the on-scene Police Commander in order to keep onlookers at a safe distance from operations. Barrier tape may be utilized to create a visible perimeter.
- **Unstable Vehicles** – Unstable vehicles shall be stabilized as soon as possible. The objective of stabilization is to provide the maximum number of contact points between the vehicle and the ground and spread these points over the widest area possible. Do not test for stability by pushing the vehicle.
- **Hazardous Materials** – Personnel shall be constantly aware of the possibility that involved vehicles may contain hazardous materials. Vehicles transporting hazardous materials may not be placarded. Alternative motor fuels such as Propane (LPG) or Compressed Natural Gas (cng) should also be considered. SCBA shall be used if the presence of hazardous materials is suspected or confirmed. Obtain manifests/shipping documents if a commercial carrier vehicle is involved in the incident
- **Electrically Operated Rescue Tools** – Make sure that when using the reciprocating saw you constantly keep it lubricated with a soap-water solution.

Gaining Access

- A route for EMS personnel to gain access to the victim(s) shall be provided as soon as possible. This will allow for patient assessment and initiation of emergency care while extrication operations are conducted.
- The method and route for gaining access shall be selected with speed and safety as the major considerations. Possible routes include undamaged doors, windows (side and rear tempered windows are easily shattered with a sharp pointed tool), and body sheet metal such as the roof.
- The route selected for gaining access does not have to be the route by which the victim will ultimately be removed.

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 5 of 7</i>

Disentanglement

- This process provides for removing any obstructions preventing the removal of the victim from the vehicle, and providing a pathway large enough for required equipment to go in and the victim to be removed.
- Common obstructions to victim removal are deformed sheet metal, doors, pedals, seats, dashboard, and steering wheel/column assembly.
- A number of methods can be utilized to effect disentanglement, these include:
 - **Disassembly** – The removal of fasteners such as bolts and nuts using common hand tools.
 - **Distortion** – The forcible bending or twisting of parts such as forcing open a door.
 - **Displacement** – The movement of vehicle components from one place to another such as moving the seat backward or pulling the steering wheel forward.
 - **Severance** – The cutting of vehicle components such as cutting the steering wheel or removing the roof.
 - Often a combination of these methods is required as in a dash roll-up which combines severance (cutting the base of the "A" pillar) with displacement (pushing the dash up and forward).

Removal

- Removal of victims shall be performed by or under the direction of EMS personnel.
- Generally victims will be immobilized prior to removal with short and/or long backboards.

Supplemental Restraint Systems – SRS (Air Bags)

- In addition to seat and shoulder belt restraint systems, many passenger vehicles are equipped with air bags.
- The driver-side air bag module is located in the hub of the steering wheel.
- The passenger-side air bag module (if the vehicle is so equipped) is in the dashboard above the glove compartment.
- Side curtain air bags are possibly located in the "B" pillar or roof.
- Verify locations of SRS components with the apparatus computer program (Crash Recovery System)

Rescue with Un-deployed Air Bag

- Air bags that are in the steering wheel and dashboard will deploy in a moderate to major frontal or near frontal collisions.
- Side air bags are meant to deploy in a side collision.

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 6 of 7</i>

- The following guidelines shall be followed when a vehicle is thought to be equipped with an air bag that did not deploy:
 - Determine if the vehicle is equipped with air bag(s).
 - Check for a larger, more rectangular steering wheel hub, about 6 inches by 9 inches.
 - Check for an "SRS" or similar initials molded on the trim cover of the air bag module.
 - When cutting any of the A, B or C pillars, there is a potential of damaging the bag inflators. It is imperative that you evaluate the vehicle and the areas where you will need to remove the plastic and trim in these areas. When bags are present, it is not imperative that you know the exact location of the inflator. What is imperative is that you know that the inflator is not where you are going to make your cut.
 - DO NOT place your body or any objects/tools on the air bag module trim cover or close in front of an un-deployed air bag module.
 - Safely disconnect or cut the battery cables (cut the negative wire first) before cutting into the steering column if possible. Turning the ignition switch off will not deactivate the air bag system.
 - DO NOT cut or drill into an un-deployed air bag module or attempt to take the module apart. This will avoid possible deployment and exposure to potentially toxic chemicals. Do not touch or inhale exposed chemicals in the unlikely event the metal inflator canister of an un-deployed air bag module is ruptured or cut.

Rescue with Deployed Air Bag

- Use normal extrication procedures and equipment. There are no hazardous medical consequences for an occupant or rescuer from a deployed air bag. The surface of deployed air bag(s) and the vehicle interior may be dusted with corn starch or talcum powder, which is used to lubricate the air bag as it deploys, and sodium compounds, a byproduct of the gas generated by combustion.
- Wear normal protective equipment including eye and hand protection. This will guard against possible skin or eye irritation from the powdery air bag residue. Avoid getting air bag residue into your eyes or into the occupant's eyes or wounds.
- Be aware of hot metal parts underneath the deployed air bag fabric. These components are located inside the steering wheel hub or behind the dashboard area. Push the deflated air bag aside for occupant removal. There is no need to cover, remove, or repack the air bag during extrication.

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<i>Issue</i>	<i>06-10</i>	<i>Revised</i>	<i>10-11</i>
			<i>Page 7 of 7</i>

APPROVED:



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