



FOR FLEET MANAGERS, PATROL COMMANDERS, QUARTERMASTERS, EMS & FIRE APPARATUS OFFICERS, FLEET SAFETY DIRECTORS

VEHICLE TRAUMA READINESS & FLEET STAGING STANDARD

Operational apparatus layout, cabin reach protocols, environmental heat mitigation and multi-casualty staging for patrol, commercial and fleet vehicles.

"Doctrine Before Gear. Competency Before Equipment. Accountability Always."

FLEET IDENTIFICATION BLOCK · AGENCY / FLEET BINDER COPY

One copy per vehicle · file with the inspection record

AGENCY / ORGANIZATION NAME

DEPARTMENT / DIVISION

FLEET UNIT / VEHICLE ID

VEHICLE YEAR / MAKE / MODEL

ASSIGNED PRIMARY OPERATOR / BADGE / CALL SIGN

FLEET MEDICAL OFFICER / ARMORER LEAD

EFFECTIVE IMPLEMENTATION DATE

ANNUAL REVIEW DATE

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Clinician-Founded · Veteran-Led · Evidence-based prehospital trauma standards · MARCH · NFPA 3000 · OSHA 29 CFR 1910.151 · Fillable binder and inspection grid
Service-Disabled Veteran-Owned Small Business (SDVOSB) | SAM Registered | CAGE: 9VFL3 | UEI: YU3ZMJ44REA5 | Kits Assembled in the USA



EXECUTIVE SUMMARY

Every vehicle carries something different. That is the problem.

Walk any motor pool and open six trunks. One car has a full trauma bag behind the spare tire. One has a tourniquet in the glove box, expired. One has a sealed kit that was bought three years ago and never opened. One has road flares on top of the medical case. Two have nothing the driver can reach from the seat. In a multi-vehicle response, an officer who runs to a partner's car does not know where the kit is, what is in it, or whether the trunk heat has already killed the chest seals. This standard exists to end that variability: **same kit, same place, every vehicle, every shift**, with a cabin-reach rule, a thermal rule, a three-tier loadout, and an inspection cadence a quartermaster can sign.

2 s to a tourniquet and a pressure dressing from the belted driver seat, one-handed — the cabin reach rule	90–180 s planning window from an uncontrolled arterial extremity wound to loss of consciousness	+40°F typical closed-cabin temperature rise in the first hour, most of it in the first 30 minutes	3 tiers immediate reach, staged apparatus bag, multi-casualty trunk cache — one ladder for every vehicle
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The physiological exsanguination clock

Hemorrhage remains the leading cause of potentially survivable death in trauma; the landmark military analysis put it at roughly nine in ten potentially survivable deaths, many of them from bleeding that a tourniquet or packing could have controlled. A transected femoral or brachial artery can bleed to unconsciousness in a few minutes; this standard plans on **90 to 180 seconds** as the working window. Now run the trunk scenario against that clock: a wounded driver exits under fire, moves to the rear, works the liftgate, and digs past tire tools and flares for a kit that may not be there. The clock runs out before the windlass turns. Distance to the first tourniquet is the variable the fleet manager controls.

THE 2-SECOND CABIN REACH RULE

At least one proven arterial tourniquet (windlass or ratcheting) and one pressure dressing must be accessible to the seated, belted driver, one-handed, with either hand, within two seconds, without releasing the seat belt. This is the minimum for every vehicle in the fleet, marked or unmarked, patrol or commercial.

What standardization buys

Standardization converts medical equipment from a personal convenience item into a fleet-wide life-support platform. The officer who jumps into any unit knows the tourniquet is on the driver door, the response bag is behind the passenger seat, and the multi-casualty case is in the cargo bracket. Training transfers across the fleet. Inspection becomes a checklist rather than a scavenger hunt. Restock is a line item rather than a surprise. And when an incident is reviewed, the agency can show a written standard, an inspection record, and a restock log, which is what the words “reasonable” and “defensible” actually rest on.

Scope

This standard applies to marked and unmarked patrol vehicles, sheriff's road units, K-9 vehicles, fire and EMS apparatus staging for non-transport response, DOT and public-works incident-response vehicles, commercial and heavy-truck fleets under OSHA 29 CFR 1910.151, private security patrol and armed transport, and expedition or remote work vehicles. Where an agency's medical director, state EMS statute, or manufacturer instruction is stricter, the stricter rule governs.



THE 2-SECOND REACH

Vehicle cabin ergonomics and mounting geometry



Three of the four cabin staging zones in one cockpit: headrest reverse mount, driver door map pocket, console side panel. The visor sleeve (zone 1D) carries a micro-IFAK. Illustration.

A reach test decides the mounting location, not a catalog. Sit belted in the driver seat, close your eyes, and reach with the weak hand: if the tourniquet is not in your hand in two seconds, the location fails. Zones 1B-1D pass it in most patrol platforms; the headrest kit (1A) is for others, not the driver. Pick one primary and one secondary per vehicle type, then make every vehicle of that type identical.

ZONE	LOCATION	WHAT GOES THERE	WHY IT PASSES
1A	Driver headrest, reverse mount	Breakaway quick-pull IFAK on the rear of the driver headrest	For others, not the driver: reached from outside the open door by a partner pulling the driver out
1B	Driver door map pocket	Low-profile tear-away pouch, high-visibility red or coyote, on a rigid backer	Weak-hand reach without turning; the rigid backer keeps the pouch out of the pedal box
1C	Center console / tunnel bridge	MOLLE-compatible side-panel pouch facing the driver	Strong-hand reach that leaves the weapon hand free when the console side is chosen correctly
1D	Overhead visor sleeve	Micro-IFAK: one tourniquet, one pair of gloves, one compression dressing	Secondary only; a visor sleeve carries a micro-IFAK, not the whole kit

Mechanical safety: airbags, projectiles, and retention

Zero-interference rule. Nothing is mounted across the steering-wheel hub, on a passenger dash panel that carries an airbag tear seam, or on A-, B-, or C-pillar trim inside a side-curtain deployment path. The vehicle manufacturer's upfit guide marks these zones; the fleet mechanic signs off on every mounting location before it is copied across the fleet.

Retention. In a crash, a loose two-pound kit becomes a projectile. Friction fit and hook-and-loop alone are prohibited for any cabin-mounted kit; use positive-retention straps with metal or heavy-duty polymer buckles, a tested bracket, or a headrest-post mount. The ambulance equipment-mount standard (SAE J3043) tests mounts against crash pulses up to 26 G; a patrol cabin deserves the same logic even where no standard compels it.

Pull direction. Orient every tear-away pouch so the pull tab faces the driver and the pull is toward the body, not across it. Test the pull with gloves on and with the seat belt locked.

THE 140°F TRUNK REALITY

Thermal degradation science and preservation



Left to right on the bare trunk floor: a heat-curved chest seal, a cracked windlass, stiffened gloves. Beside them, the insulated bag that should have held them. Illustration.

A closed vehicle is a solar oven, and the trunk is the hottest, darkest, least-ventilated box in it. The cabin studies are unambiguous: interior temperature rises about 40°F above ambient within an hour regardless of the starting temperature, roughly 80% of that rise happens in the first 30 minutes, and cracking the windows changes almost nothing. On a 90°F day that is a 130°F cabin; in a Tempe, Arizona summer test the cabin air averaged 116°F after an hour while the dashboard reached 157°F. Dark cargo bays and trunk floors in direct sun sit at the top of that range, and in Florida, Texas, Arizona and California fleets they live there for months.

CONSUMABLE	WHAT HEAT DOES TO IT	FIELD CONSEQUENCE
Hydrogel chest seals	Adhesive softens, flows, and loses tack; the release liner can bond to the gel	A degraded seal applied to sweaty, bloody skin slides or lifts and does not hold an occlusive barrier
Hemostatic gauze	The agent tolerates heat better than its package: laminate delaminates or pinholes under thermal cycling. The leading kaolin gauze IFU says store at 77°F or below and away from heat and direct sun	Loss of sterility and moisture ingress; an out-of-range item is an expired item
Polymer tourniquets	UV plus repeated 140°F+ cycling embrittles windlass rods, clips and buckles	A rod that snaps at the third turn is a failed tourniquet; rear-shelf and window-deck mounting is prohibited
Nitrile gloves	Heat-accelerated oxidation and ozone attack; the film stiffens and cracks	Gloves tear on rapid donning; the exposure protection is gone when it is needed
Naloxone, other drugs	Labeled storage ranges are exceeded daily in a summer trunk	Potency loss; keep medications in the cabin or an insulated container, never the trunk floor

THERMAL MITIGATION STANDARD

Trunk- and cargo-stored trauma gear rides in an insulated, foam-lined bag or an airtight hard case with a pressure-relief valve, never loose on the trunk floor. No medical item is mounted in direct sun against rear glass or a windshield deck. Hydrogel seals and nitrile gloves stored in non-climate-controlled vehicles are rotated every 12 months regardless of printed expiration; a temperature indicator or logger rides in every Tier 3 case and is read at the quarterly inspection.

The cheapest fix is the cabin: Tier 1 lives where the driver lives, in the climate the driver keeps. The second cheapest is rotation: a seal that costs a few dollars is replaced on a schedule, not discovered dead on a chest.

Run your own trunk test. Put a maximum-minimum thermometer inside the Tier 3 case and another loose on the trunk floor for one week in July, then write both readings on page 13. The gap between them is the argument for the case, the rotation schedule, and the cabin location of Tier 1.

ARCHITECTURE

The universal 3-tier vehicle medical ladder



The ladder in one frame: tear-away pouch, staged response backpack, multi-casualty hard case. Illustration.

Three tiers, three locations, three deployment times. The ladder is the same in a patrol sedan, an interceptor SUV, a K-9 unit, a DOT response truck and a commercial tractor; only the volume changes. Every officer or driver in the fleet learns it once.

Volume scales with the mission. A two-officer traffic unit on an interstate carries a heavier Tier 2 than a downtown foot-beat car; a rural deputy an hour from a trauma center carries a Tier 3 that assumes prolonged care. The ladder is fixed; the count per rung is the agency's decision, documented in the fleet binder.

TIER	ROLE	TARGET	DEPLOY	LOCATION
1 • Immediate reach	Driver cockpit IFAK	Single casualty: self-aid or partner aid for extremity hemorrhage	< 2 s	Driver door, console, or visor, per the reach test
2 • Staged apparatus	Response bag	Multi-system trauma: penetrating chest, burns, airway, fractures	< 30 s	Front passenger floorboard or behind the driver seat, grab-and-go
3 • Fleet MCI cache	Hard case	Multiple casualties: active threat, pile-up, prolonged rural delay	< 60 s on arrival	Cargo bracket, drawer system, or trunk mount in an insulated case

Rules that make the ladder work

Tier 1 is never cannibalized to restock Tier 2 or 3. The cockpit kit is the driver's own life support and is replaced from the precinct cache, not from the trunk.

Every tier is identical across a vehicle class. Same pouch, same contents order, same pull-tab orientation, same mounting point. A supervisor can inspect any unit blind.

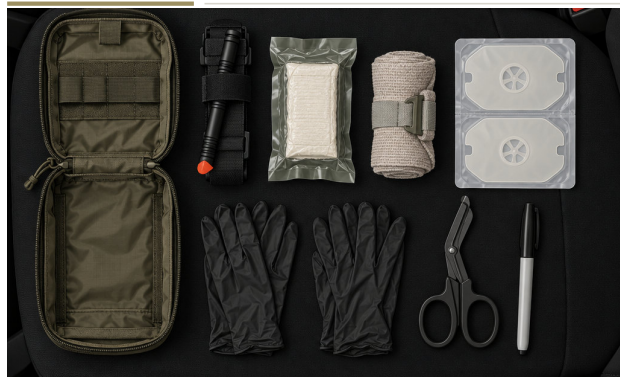
Designated units carry Tier 3; every unit carries Tiers 1 and 2. The agency writes down which units are Tier 3 carriers and CAD knows it.

Deployment time is measured, not assumed. The quarterly inspection includes a timed pull of Tier 1 from the seat and a timed grab of Tier 2 from the door.

Contents follow MARCH. Massive hemorrhage first in every tier; airway, respiration, circulation, and hypothermia scale up through Tiers 2 and 3.

TIER 1 SPECIFICATION

Driver cabin rapid-action IFAK



Tier 1 laid out on the passenger seat: tourniquet, hemostatic gauze, pressure dressing, chest seal pair, two pairs of gloves, shears, marker. Illustration.

One pouch, seven items, blind reach. Tier 1 is built for the first ninety seconds after a wound to the driver or the partner, in the cabin or at the door. Everything in it is a hemorrhage or exposure item; nothing in it needs a second hand to open.

#	ITEM	QTY	TECHNICAL CRITERIA
1	Arterial tourniquet	1	Proven windlass or ratcheting limb tourniquet (C-A-T Gen 7, SOF-T Wide, or SAM XT class). Authentic: purchased from the manufacturer or an authorized distributor with lot traceability. Black, high-visibility orange, or coyote; staged open and pre-threaded per manufacturer instruction
2	Hemostatic gauze	1	3 in. × 12 ft. Z-fold, kaolin- or chitosan-impregnated, vacuum-sealed
3	Pressure dressing	1	4 in. flat-fold emergency trauma dressing with integrated pressure bar or closure
4	Vented chest seals	1 pair	Full-size vented occlusive dressing, two per pack (entry and exit)
5	Nitrile gloves	2 pairs	Medical-grade, minimum 5 mil, chemotherapy-permeation tested (ASTM D6978) for opioid exposure
6	Trauma shears	1	7.25 in. high-leverage, fluoropolymer-coated blade
7	Marker	1	Permanent marker for tourniquet time and triage marking

Staging requirements

Ambidextrous, blind-reach deployment. High-contrast pull tab; the pouch opens with one pull and presents the tourniquet first.

Tourniquet staged, not packaged. Retail packaging removed; strap routed and windlass secured per the manufacturer, so the first motion is application, not unwrapping.

Time tag. A blank white time strip or the marker rides with the tourniquet; the application time is written on the strap and the casualty card and narrated on body-worn camera.

Duplicate, do not share. A two-officer unit carries two Tier 1 kits, one per seat position, mounted identically.

Cabin climate. Tier 1 always lives in the passenger compartment; that is deliberate. It is the one tier whose adhesives and gloves never leave the driver's air conditioning.

A Tier 1 that meets this specification also meets the component floor written into the Improving Police CARE Act for grant-funded law enforcement trauma kits (tourniquet, bleeding-control bandage, gloves, marker, shears, instructions, container), with hemostatic gauze and chest seals carried as locally approved additions. Keep the printed instruction card in the pouch.

TIER 2 SPECIFICATION

Staged apparatus response bag



Tier 2 open on the passenger floorboard: five color-coded MARCH compartments, hemorrhage first. Illustration.

Tier 2 is the bag an officer or driver carries to a severe crash, a pedestrian strike, or an industrial injury before EMS arrives, and the bag a second unit grabs when a partner is down. It is compartmentalized in MARCH order so the hand finds the right pocket without reading a label.

Tier 2 scales with mission: an interstate unit adds a second splint and a third pressure bandage; an urban unit adds a second tourniquet pair. Write the variant in the fleet binder and keep the compartment order the same.

MARCH	CONTENTS	NOTES
M Massive hemorrhage	2 tourniquets · 2 hemostatic Z-fold gauze · 2 × 6 in. modular pressure bandages · 1 abdominal / junctional compression wrap	Top compartment, red tab, opens first
A Airway	1 × 28 Fr nasopharyngeal airway with lubricant · 1 pocket CPR mask with one-way valve	Position first; NPA only if trained and authorized by the medical director
R Respiration	2 vented chest seal twin packs (4 seals) · 1 roll hypoallergenic surgical tape	Seals ride in the cabin-side pocket, away from the floor
C Circulation / splinting	1 × 36 in. padded aluminum moldable splint · 2 triangular cravats · 2 elastic wraps	Fracture care for crash extrication and pedestrian strikes
H Hypothermia	2 heavy-duty heat-reflective survival blankets	Every trauma casualty gets one, in every season
+ Burn and eye	1 × 4 in. × 4 in. hydrogel burn dressing · 2 rigid eye shields	Vehicle fire, battery and coolant injuries

Bag construction and staging

Construction. 1000D nylon or equivalent tear-resistant fabric, stowable backpack straps, MOLLE webbing, and a clamshell opening so the whole bag reads at a glance on the ground.

Location. Front passenger floorboard or a rear-seat organizer behind the driver; secured, but released with one buckle.

Deployment target. Under 30 seconds from the driver seat to the bag open at the casualty.

Inventory card. A printed contents list in the lid pocket; the quarterly inspection counts against it.

Scope. Airway adjuncts and any medication in Tier 2 exist only where the medical director has written the standing order and the training record backs it.

TIER 3 SPECIFICATION

Multi-casualty trunk cache (MCI)



Tier 3 open beside the vehicle: six tourniquets, six bandages, six gauze packs, four seal packs, blankets, a rolled litter in the lid, triage ribbons. Illustration.

Tier 3 treats four to ten casualties at once: an active threat, a multi-vehicle pile-up, a rural incident with a long EMS delay. It lives in the cargo area in a case that protects it from the heat described on page 4, in a bracket that keeps it from becoming a projectile, and it comes out of the vehicle in under a minute.

ITEM	QTY	SPECIFICATION
Tourniquets	6	Same model as Tier 1; retail packaging removed, staged for immediate grab
Pressure bandages	6	Assorted 4 in. and 6 in.
Compressed gauze	6	For wound packing when hemostatic gauze is exhausted
Vented chest seals	4 twin packs	8 seals; stored in the case lid, above the floor
Rapid-extraction litter	1	Poleless litter or heavy-duty drag sheet rated 500 lb or more
Hypothermia blankets	4	Heavy-duty heat-reflective
Triage ribbon kit	1	Immediate red, delayed yellow, minimal green, expectant black; matches the county MCI plan
Gloves	10 pairs	Assorted sizes, ASTM D6978
Case	1	Crushproof, dustproof, watertight hard case with pressure-purge valve and foam or padded dividers; temperature indicator inside the lid

Packaging and mounting standard

Case. Airtight hard case in the mid-size class (about 20 to 22 in. long) for sedans and SUVs; a longer case only where the cargo bracket accepts it.

Mount. Cargo-vault drawer, side-barrier quick-release bracket, or trunk-floor tie-down; the case is secured for the drive and released with one motion.

Marking. A high-visibility medical marking on the exterior of the case so a mutual-aid officer can find it in a strange trunk in the dark.

Count. The contents list is printed inside the lid; deployment is logged and the case is not returned to service below 100% (page 14).

Designated Tier 3 carriers should be spread across the fleet by district and shift so that at least one case arrives inside the first three units on any major incident. Write the carrier list into CAD unit attributes.

VEHICLE PROFILES

Specialty fleet configurations

The ladder does not change; the mounting solution does. Four profiles cover most agency fleets. Add a profile to the fleet binder for every platform the agency runs.

PROFILE	CONSTRAINT	STAGING SOLUTION
Marked patrol sedan (full-size sedan platforms)	Shallow trunk; radio trays and spare-tire well eat the floor	Tier 1 on the driver door; Tier 2 in a low-profile trunk-lid organizer or behind the passenger seat; Tier 3 in a compact hard case bracketed to the radio rack
Interceptor SUV / utility (Explorer, Tahoe, Durango class)	Cargo cage; prisoner partition; upfit electronics	Tier 1 at each front seat, door or console; Tier 2 behind the driver seat; Tier 3 on a cargo-vault drawer or side-barrier quick-release bracket
K-9 patrol vehicle	Kennel insert takes the cargo bay; heat-alarm system; handler works alone	Tier 1 and Tier 2 as SUV; add the canine trauma kit (below) in the handler-side cargo pocket, outside the kennel
Slick / unmarked / executive protection	Nothing overt; leather and trim must stay factory	Under-seat pull-out bracket or leather-matched door-pocket sleeve for Tier 1; Tier 2 in a plain duffel in the trunk well; Tier 3 in a plain hard case; zero tactical branding



K-9 unit: the canine kit rides in the handler-side cargo pocket, outside the kennel. Illustration.

Canine trauma kit (K-9 units)

Handlers train the canine kit with the unit veterinarian, and the vet signs the protocol. A K-9 heat-alarm system protects the dog; the kit protects the dog when the alarm was not the problem. The dog's conical limbs defeat standard human tourniquets, so the canine device is a separate line item, not a spare from Tier 3.

ITEM	PURPOSE
1 canine tourniquet / pressure wrap sized for the dog's limb (Slushman-type or unit-veterinarian-approved)	Extremity hemorrhage; the dog's conical limbs defeat standard human tourniquets
1 soft basket muzzle	Bite protection while treating a painful, frightened working dog
2 gauze rolls and 1 self-adherent wrap	Paw and pad lacerations, the most common K-9 injury
1 intranasal naloxone kit	Opioid exposure during narcotics detection, under the unit veterinarian's protocol
1 digital thermometer with lubricant	Heat injury screening; the kennel heat alarm is not a thermometer
Unit veterinarian card	Name, after-hours number, nearest 24-hour emergency animal hospital

Adding a profile to the fleet binder. Every new platform gets four steps before the first unit rolls: the belted reach test in that cabin, the fleet mechanic's sign-off on each mounting point against the upfit guide and airbag zones, a photograph of each tier in place, and a one-page profile sheet with locations, pull direction and bracket part numbers.

THREAT ENVIRONMENT

High-risk traffic stop and vehicle ambush medical protocol



Self-aid in the cabin: tourniquet high and tight on the thigh while the threat is still active, weapon hand still on the holster. Illustration.

Traffic stops, pursuits and roadside encounters account for a large share of felonious assaults on officers in the FBI's LEOKA data, and vehicle crashes remain a leading cause of accidental line-of-duty death. The cabin is where the officer is most often wounded and least able to move. The protocol below assumes the driver is hit while still belted, under fire, with the Tier 1 kit within two seconds.

PHASE	ACTION	STANDARD
1 • Fight from the seat	Return fire or suppress; drive out if the vehicle will move. The engine block and A-pillar are the only cover in the cabin	Threat first. No medical care that costs the fight
2 • Self-aid in the cabin	Extremity bleed while pinned: pull Tier 1, apply the tourniquet high and tight on the limb over the uniform, without unbuckling, one-handed	Under fire with the wound source hidden, high and tight is the rule. If trained, convert once the threat is suppressed: deliberate placement 2-3 in. above the wound on bare skin, never over a joint
3 • Egress and cover transition	Release the belt, kick the door or roll to the floorboard, move to the rear wheel and trunk line	Move with the tourniquet on; reassess bleeding at cover
4 • Partner extraction	Reach in from outside the door, pull the headrest IFAK (zone 1A), apply the tourniquet, drag using the seat-belt webbing or a drag harness	The reverse headrest mount exists for this reason: the partner reaches it without climbing in

Training standard for this protocol

Every officer performs a timed, belted, weak-hand Tier 1 pull and self-application in the actual vehicle class they drive, in low light, at least every six months.

Partner extraction is rehearsed with a weighted mannequin from the driver seat of a live vehicle, headrest kit to drag, and timed.

The tourniquet time is written and narrated on body-worn camera as soon as the threat allows; the medical after-action review pulls the timestamp.

A second tourniquet goes side-by-side above the first if bleeding continues; the deliberate re-placement happens at cover, not in the seat.

SECONDARY HAZARDS

Vehicle fire, thermal burn and window extrication integration



Driver door panel: tear-away IFAK, spring-loaded window punch, hook-style belt cutter, all in positive-retention clips. Illustration.

High-speed collisions bring their own hazards after the impact: ruptured fuel systems, coolant at 200°F, battery acid, and, in electrified fleets, lithium-ion thermal runaway that reignites hours later and emits toxic gas. The officer who reaches the wreck first needs three tools before the trauma bag, and they belong on the door panel next to Tier 1.

TOOL	SPECIFICATION	WHY IT IS MOUNTED WITH TIER 1
Spring-loaded center punch	Automatic-release punch rated for tempered side glass; laminated glass needs a different approach and the officer should know which the fleet carries	A pinned casualty behind a jammed door is reached through the window first
Seat-belt cutter	Hook-style, shielded blade, fluoropolymer-coated, one-hand operation	A locked retractor across an unconscious casualty is cut, not fought
Hydrogel burn dressings	4 in. × 4 in. minimum; a facial burn dressing in Tier 2	Covering a facial or hand burn once it is cooled limits further tissue injury; on a large burn, watch for hypothermia
Gloves and eye protection	Nitrile gloves; wrap-around eye protection on the officer, not in the bag	Fuel, coolant and battery electrolyte are the exposure; the rescuer is casualty two if unprotected

Hazard sequence at a burning or electrified vehicle

Look before you touch. Fluid on the road, smoke color, hissing or popping from a battery pack, downed wires.

Approach from upwind and uphill of fuel and battery gases; stage the patrol vehicle so it is not the second fire.

Electric and hybrid vehicles: assume high voltage is live until the fire department confirms; do not cut orange cabling; a thermal-runaway battery is a fire-service problem, not a patrol problem.

Extricate only if the vehicle or the casualty is burning or the casualty cannot be treated in place. Otherwise, hemorrhage control and burns are treated in the seat until fire and EMS arrive.

Cool, then cover. Cool the burn with running water for at least 10 minutes, ideally 20, dress with hydrogel, then keep the casualty warm under a reflective blanket; large burns chill fast.

THE EVACUATION BOTTLENECK

Vehicle-mounted rapid extraction and litter protocols



The two-officer extraction: one behind the head keeping the spine in line, one clearing the legs and guiding the hips, litter staged at the door threshold. Illustration.

Hemorrhage control is the first minute; extraction is the next five. A 220-lb casualty in 45 lb of duty gear and armor does not leave a crushed cabin or cross a live roadway by good intentions; it takes a litter, two rescuers, and a rehearsed sequence. Tier 3 carries the litter. Tier 2 carries the cutter. The training calendar carries the rehearsal.

LITTER	SPECIFICATION	USE
Poleless litter	Reinforced nylon, 6 to 8 handles, folds to the size of a water bottle, rated 500 lb or more	Standard Tier 3 litter; road, parking lot, and stairwell carries
Semi-rigid drag sheet / sled	Plastic sled-type litter that slides over rough ground	Ditch and embankment extractions, culverts, wooded roadside; drags where a carry is not possible
Improvised	Seat-belt webbing, a rescue strap, or a drag harness on the casualty's vest	Under fire or with one rescuer; the reverse headrest kit and a drag handle are the minimum

The two-officer vehicle extraction sequence

STEP	OFFICER 1 (HEAD)	OFFICER 2 (DOOR)
1	Stage the litter flat at the door threshold; announce the plan	Confirm the vehicle is stable and not burning; chock if needed
2	From behind, forearms under the armpits, hands gripping the casualty's chest or vest; hold the head in line with the spine	Cut the seat belt at the retractor side; sweep the feet clear of the pedals
3	On count, rotate the casualty 90° toward the door, hips pivoting on the seat	Guide the legs; keep the knees together
4	Lower the shoulders onto the litter head-first	Lift and set the hips and legs; secure the litter straps
5	Reassess the tourniquet and airway before the first lift	Call the carry: lift on the count, walk the short axis to cover or the ambulance

Spinal motion restriction does not override hemorrhage or fire; an uncontrolled bleed or a burning vehicle is moved first and immobilized second. Rehearse the sequence quarterly with a weighted mannequin in the vehicle class the unit drives.



PRINTABLE TOOL

Quarterly fleet medical inspection audit checklist

One sheet per vehicle per quarter. The quartermaster or fleet armorer inspects, initials, and files it with the vehicle record; the supervisor countersigns. Any NO in the seal column or any FLAG in the thermal column triggers a same-shift swap from the precinct cache and a note in the remarks.

Vehicle / unit ID Quarter / year Odometer Date

#	ITEM	LOCATION	EXPIRES	SEAL Y	SEAL N	THERMAL	INIT.
1	Cabin Tier 1 tourniquet — polymer, windlass rod, clip, strap and retention	Zone 1B/1C/1D		☐	☐		
2	Cabin Tier 1 vented chest seals — hydrogel consistency; replace if soft, flowed or lifted	Tier 1 pouch		☐	☐		
3	Cabin Tier 1 hemostatic gauze — vacuum package intact, no pinholes or delamination	Tier 1 pouch		☐	☐		
4	Cabin Tier 1 nitrile gloves — no stiffening, discoloration or tears	Tier 1 pouch		☐	☐		
5	Tier 2 response bag — zipper operation, inventory count against lid card, NPA lubricant	Passenger floor / rear seat		☐	☐		
6	Tier 2 burn dressings and eye shields — foil packages intact	Tier 2, + compartment		☐	☐		
7	Tier 3 MCI hard case — O-ring seal, purge valve, litter strap stitching, temperature indicator read	Cargo bracket		☐	☐		
8	Triage ribbons / tags staged — red, yellow, green, black present and legible	Tier 3 lid		☐	☐		
9	Timed pulls — Tier 1 from the belted seat under 2 s; Tier 2 to the door under 30 s (record times in remarks)	Vehicle		☐	☐		
10	Window punch and belt cutter present, in clips, punch fires	Driver door panel		☐	☐		

Thermal status codes: OK — indicator within range and no heat damage seen · FLAG — indicator exceeded or any item shows heat change; replace item and note · REPLACE — item swapped this inspection. **Any seal NO or any FLAG:** same-shift swap from the precinct cache.

REMARKS • TIMED PULL RESULTS • ITEMS SWAPPED • LOT NUMBERS

Inspector Supervisor Next due





SUSTAINMENT

Restocking, standardization and shift-change handover protocol

Inspection every quarter finds the slow failures. The shift-change walkaround finds the fast ones: the kit that was deployed at 0300 and not reported, the bag left at the hospital, the case that rode home in another unit. Thirty seconds at the start of every shift keeps the ladder honest.

The 30-second shift-change walkaround

- ☐ Tier 1 cabin kit physically present, pull tab facing the driver, tourniquet staged
- ☐ Tier 2 bag present in the rear passenger compartment, secured, inventory card in the lid
- ☐ Tier 3 case present and locked in its bracket; temperature indicator glanced (Tier 3 carriers)
- ☐ Window punch and belt cutter in their clips on the door panel
- ☐ No broken tamper seal on any tier; if broken, open, count, and report before rolling

Unit

Oncoming officer

Date / shift

Post-incident restock protocol

Report on deployment. Any kit opened during a shift is reported to the fleet armorer or precinct cache before end of shift, with the incident number and the items used.

No partial kits on patrol. Agency policy prohibits returning a vehicle to service without 100% restock of used hemorrhage-control consumables. Tier 1 is restocked before the vehicle leaves the lot.

Precinct cache. Each precinct or station holds a sealed restock cache sized to its fleet: at minimum two complete Tier 1 pouches per ten vehicles, plus tourniquets, gauze and seals for Tier 2 and 3 replenishment.

Lot traceability. The restock log records the item, lot number, and vehicle. It is the record that proves authentic sourcing when a device is questioned.

Evidence. A used tourniquet or dressing from a use-of-force or crash scene may be evidence; the restock log notes where it went.

Restock log

DATE	UNIT	ITEM(S) USED	INCIDENT #	LOT #	RESTOCKED BY

Standardization in one sentence: if a supervisor can open any vehicle in the fleet blindfolded and put a hand on the tourniquet, the program is working. If not, the walkaround and the inspection grid will tell you which vehicle broke the rule and when.

PROCUREMENT

How agencies, municipalities and fleets source vehicle trauma systems

The fleet standard on the preceding pages is a bill of materials by vehicle class times a vehicle count. MED-TAC International Corp. builds it as line-item quotes with the vendor documentation a fleet audit, a council packet, or a grant reviewer asks for: manufacturer of record, lot traceability, and the component checklist.

CHANNEL	WHO	HOW IT WORKS
Net 30 terms	Verified law enforcement, municipal, county, state and federal agencies and public school districts	Purchase order against a written quote; quotes are valid 45 days; all other buyers pay in full at order
Government purchase card / micro-purchase	Agencies buying under federal or local micro-purchase thresholds	Card order against a quote; bypasses the RFP cycle for urgent fleet upgrades
Direct agency quoting (RFQ)	Any agency or fleet with a bill of materials or a vehicle count	Upload the BOM or this standard's tier list with the vehicle count; the quote returns as line items by tier and vehicle class
Test & Evaluation (T&E)	Training cadres, medical directors, fleet committees	Evaluation units for mounting trials and committee review before a fleet order
Shipping	All buyers	Free CONUS shipping on orders over \$200; APO/FPO orders ship free with no minimum

DIRECT AGENCY QUOTING: RFQ AND BILL-OF-MATERIALS UPLOAD

tactical-medicine.com/pages/medical-logistics-rfq-services

GOVERNMENT CONTRACTING AND PROCUREMENT SOLUTIONS

tactical-medicine.com/pages/government-procurement-solutions



The fleet quartermaster's view: one standard, one bag, one case, one sheet per vehicle. Illustration.

Sourcing declarations

Service-Disabled Veteran-Owned Small Business (SDVOSB) Certified; SAM.gov Registered & Active; CAGE 9VFL3; UEI YU3ZMJ44REA5. Not on a GSA Schedule; direct procurement by purchase order, government purchase card, and micro-purchase.

Custom trauma kits assembled in the USA from components purchased from the manufacturer or an authorized distributor, with lot numbers recorded on the packing list.

Payment: government purchase cards, commercial credit cards, purchase orders, ACH/EFT.

No lead-time estimate is printed here; lead time is quoted per order against current stock.

Standards referenced: evidence-based prehospital trauma standards; MARCH; NFPA 3000 (active shooter / hostile event response program); OSHA 29 CFR 1910.151 (medical services and first aid); SAE J3043 (ambulance equipment mounts); Improving Police CARE Act (grant-funded law enforcement trauma kit components). Evidence: Eastridge 2012 (potentially survivable death); Kragh 2009 (tourniquet survival); McLaren 2005 and Vanos 2018 (closed-vehicle temperatures); manufacturer IFUs (storage ranges); FBI LEOKA (officer assault circumstances).



SAME KIT. SAME PLACE. EVERY VEHICLE. EVERY SHIFT.

AUTHORITY & CLINICAL DOCTRINE

Founder: Marco R. Torres, MD, NRP — physician and medical educator, U.S. Navy veteran. Fifteen years in tactical medicine as a flight medic, as a paramedic, and in high-threat protection operations; seven years teaching EMS; founder of MED-TAC International and ALKEONHealth.com. Doctrine: DOCTRINE BEFORE GEAR. Clinician-founded, veteran-led fleet trauma systems engineered to evidence-based clinical standards, and the vendor documentation a fleet audit or grant review asks for.

DIRECT AGENCY QUOTING: RFQ AND BILL-OF-MATERIALS UPLOAD



<https://tactical-medicine.com/pages/medical-logistics-rfq-services>

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LEGAL DISCLAIMER

This document is an educational operational standard for fleet and public safety leaders. It is not legal advice, a medical protocol, or a substitute for the agency's medical director, counsel, vehicle manufacturer instructions, state EMS statutes, or local medical control. Interventions listed for sworn non-EMS personnel require standing orders. Standards cited were current when published and change; verify them before relying on them. No government endorsement is implied. © 2026 MED-TAC International Corp. Free to share unmodified within your agency or company; not for resale.

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Direct agency quoting: tactical-medicine.com/pages/medical-logistics-rfq-services

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GOVERNMENT CONTRACTING

