PREFACE

This manual is for installation and unit movement coordinators, unit movement officers, convoy commanders, officers, and noncommissioned officers as guidance for planning, administration, and operation of convoys within the continental United States (CONUS). It conforms with ARs 55-29 and 55-162 and sets forth the procedures described in FORSCOM Regulation 55-1, implementing those functions associated with the convoy management system known as mobilization movement control (MOBCON). Also described are the functions and responsibilities of the state area command (STARC), the state movement control center (SMCC), the logistical support agencies (LSA), and the Office of Deputy Chief of Staff for Logistics (ODCSLOG), in their responsibility for the publication and distribution of the numbered armies in the continental United States (CONUSA) support directories and their relationship to the user in preparation for convoy movements. The procedures for MOBCON are applicable for all CONUS active Army, Army National Guard (ARNG), US Army Reserve (USAR) units, and all other Department of Defense (DOD) organizations involved in convoy operations.

Physical considerations for the preparation of convoys are described to ensure the maximum safety for personnel, vehicles, and cargo. Included are the requirements for preparing the drivers, communications, convoy organizational element lengths, vehicle and convoy identification, and highway discipline. When the procedures prescribed by this text conflict with local and/or state traffic laws, the local and state laws will apply.

The proposed target dates for implementing MOBCON as a total operational system is 2d QTR FY 91 for the ARNG and USAR units and FY 92 for the active DOD units.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

The proponent of this publication is HQ TRADOC. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, US Army Transportation School, ATTN: ATSP-TDL, Fort Eustis, VA 23604-5399.

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Field Manual
No. 55-312

Headquarters
Department of the Army
Washington, DC, 3 April 1991

MILITARY CONVOY OPERATIONS IN THE CONTINENTAL UNITED STATES

TABLE OF CONTENTS

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CHAPTER 2

CONVOY OPERATIONS PLANNING

CONVOY ORGANIZATION PLANNING

Small convoys of 20 vehicles or fewer can usually be sent out as one group. But, in planning any appreciable sized convoy, the basic requirement is to organize the given number of vehicles into manageable groups.

When operating within CONUS, a convoy should not exceed 60 minutes or battalion vehicle strength in length and will not exceed one hour pass time. Therefore, understanding time and distance factors is critical when planning a convoy. Figure 2-1 shows the relationship between distance factors and time factors.

Distance Factors

The following explains distance factors:

- Length--the length of the roadway the convoy occupies, measured from the front bumper of the first vehicle to the rear bumper of the last vehicle.
- Road space--the length of roadway occupied by a convoy or subgroup and any space added to the length that may be required for safety or to maintain flexibility. It is the sum of the lengths of the vehicles, the gaps between vehicles, the gaps between march elements, and the space allowed on the road to avoid conflict with leading and following traffic.
- Gap--the distance between successive vehicles, called vehicle distance, or between elements of a convoy or successive convoys, called column gap. It is measured from the rear of one element to the front of the following element.
- Lead--the linear spacing between the heads of elements in a convoy or between heads of successive vehicles, march units, or serials.
- Road distance--the distance from point to point by road.
- Road clearance distance--the distance that the head of a convoy must travel for the entire convoy to clear a given section of the road. It is the sum of the convoy's length and road distance.

Time Factors

The following describes time factors:

- Time length--the time required for a convoy or a subgroup to pass a given point. It is also referred to as "pass time."
- Time space--the time consumed while a convoy or one of its subgroups proceeds past any point en route. It includes the time gaps between subordinate elements and additional time required for safety and for maintaining flexibility needed at the rear of the column.
- Time gap-the period of time between successive vehicles or elements, measured from rear to front, as they move past any given point.
- Time lead--the period of time between individual vehicles or element of a convoy, measured from head to head, as they pass a given point.
- Time distance--the time required to move from one point to another at a given rate of march.
- Road clearance time--the total time a convoy or an element needs to travel over and clear a section of road. Road clearance time equals time distance plus time length.

Convoy Organizational Elements

A convoy commander can better control a convoy if it is broken into smaller, more manageable groups. There are three organizational elements to a convoy, These elements are explained as follows (see Figure 2-2):

- March column. This is, for all practical purposes, the tommy itself. It is made up of all the vehicles proceeding in a single move over the same route. A small conoy will consist of only a march column, but for a larger convoy, the march column will be made up of two or more serials.

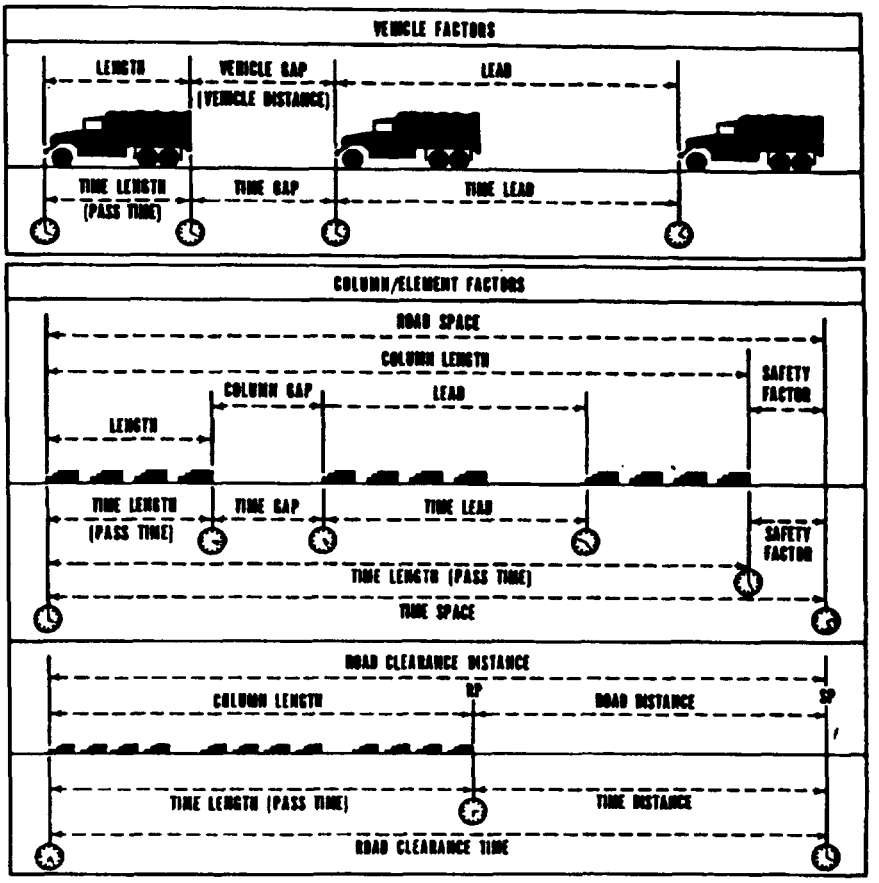


Figure 2-1. Distance and Time Factors.

ŽSerial. The serial is a subdivision of the march column. It consists of elements of a march column (convoy) moving from one area over the same route at the same time. All the elements move to the same area and are grouped under a serial commander who is directly responsible to the convoy commander. Each serial is temporarily assigned an alphabetical, numerical, or other kind of designation. This kind of identification makes it easier to prepare mad movement graphs, issue instructions, and report progress. A serial maybe divided into two or more march units.

ŽMarch unit. This is the smallest organized sub group of the convoy. It is used for command and control between rest halts where a serial cannot pass a route constriction point uninterrupted.

Convoy Functional Elements

All convoys, regardless of size, are made up of three functional elements--head, body, and trail. These elements are explained as follows (see Figure 2-3):

NOTE: To ensure the freedom of movement necessary to exercise proper control, the convoy commander has no prescribed place in the convoy.

ŽHead. This is the first task vehicle of the convoy, it is marked with a blue flag or light and carries the subordinate commander known as the pacesetter." The pacesetter rides in this vehicle and sets the pace in order to maintain the prescribed schedules and rates of march and leads the convoy on the proper route.

ŽMain body. Following right behind the head (pacesetter) is the column's main body. Since the main body is the largest part of the convoy, it can be subdivided into serials and march units for easier control and management.

ŽTrail. The trail is the last element of a march column, consisting of maintenance and medical personnel. The trail officer is responsible for march discipline, breakdowns, straggling vehicles, and control at the scene of any accident

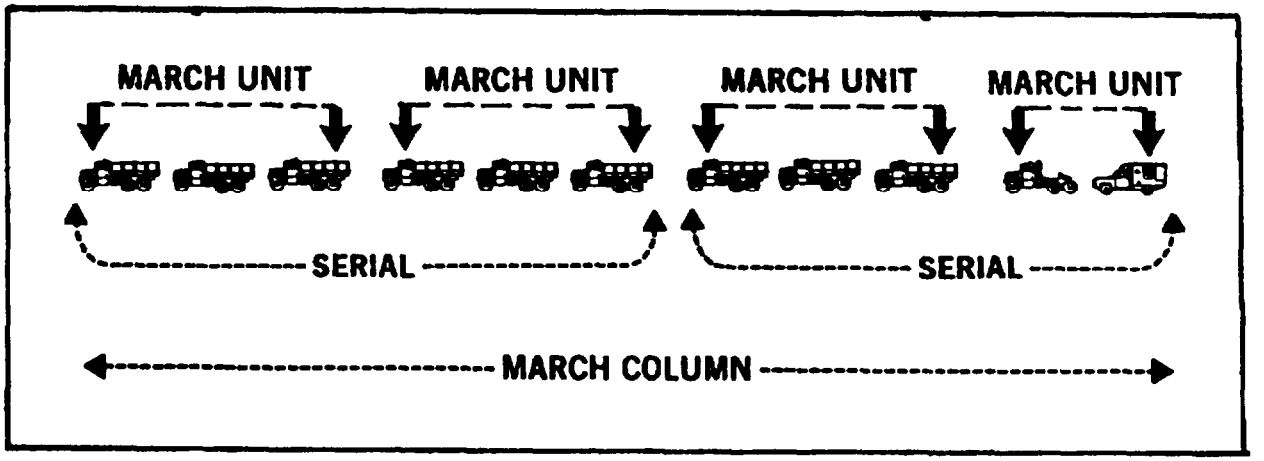


Figure 2-2. Convoy Organizational Elements.

involving his march unit until the arrival of civilian authorities. (He represents the convoy commander in those functions.) Assigned maintenance personnel repair and recover disabled vehicles. Trail party vehicles will display international orange safety flags and be fitted with a rotating amber warning light (RAWL) and a CCN. There is no static position for vehicles within the trail party. (Figure 2-4 shows equipment that can potentially be included in the trail.)

When developing convoy operation orders, the convoy commander will--

- Designate the serial/march unit commanders.
- Designate a pacesetter.
- Appoint a trail officer and a trail prey.

NOTE: The trail officer may also act as the claims officer.

- Ensure the installation's staff judge advocate's office briefs the individual assigned as claims officer.
- Instruct the trail party on how to evaluate disabled vehicles, what to do in the event of an accident, and what maintenance support is available along the route.

NOTE: For a convoy with no trail party, call the nearest installation for assistance.

INTERNAL CONVOY ORGANIZATION

The placement of the vehicles in an organizational element of a tommy is determined by many factors. One of the major factors is the danger of rearend collisions on modern expressways. To reduce the possibility of injury to personnel, place vehicles transporting troops in the first march unit of the main body of the convoy.

When empty trucks or trucks loaded with general cargo are available, use them as buffer vehicles between those transporting personnel and those loaded with hazardous cargo.

WARNING

Do not place troops in vehiclse transporting flammable fuels or other hazardous cargoes.

Other factors to consider--

Position those vehicles that require the longest unloading time near the front of the main body of the tommy. This will shorten the turnaround time.

If the convoy consists of tractor-trailers, have one tractor or bobtail per 10 tractor-trailers to support the recovery section of the convoy.

The designated pacesetter is the first or l;eading task vehicle in each serial/march unit and is responsible for regulating the speed.

Vehicles transporting hazardous cargo should be placed in the last serial of the convoy but not in the trail party.

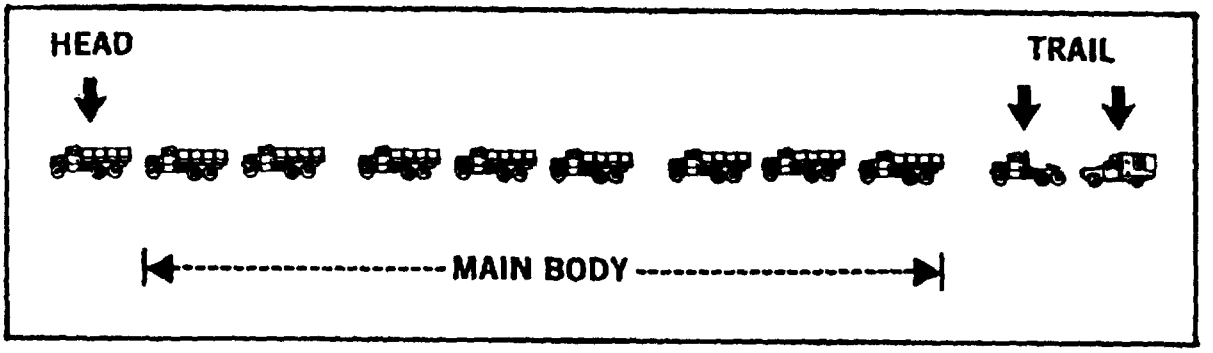


Figure 2-3. Functional Elements of a Convoy.

Convoy commanders can use the three-part checklist in Appendix E when conducting convoy operations. This checklist aids in identifying and completing all of the tasks required to plan, organize, and conduct a convoy operation.

CONVOY COMMANDER

Each convoy will be organized under the control of a convoy commander. Since the convoy commander must be free to supervise the movement of the convoy, there is no specified location for him in the convoy. The convoy commander should refrain from infiltrating through the convoy unless it is absolutely necessary for control. The convoy commander should have contact with all subordinate commanders during the movement. Maximum use will be made of radio communications.

SERIAL/MARCH UNIT COMMANDERS

Serial/march commanders are positioned where they can best control their convoy eIement. Although commanders may want to place themselves at the head of their units, it is not recommended because it will restrict their ability to control all of their vehicles. It is easier to control a unit from the rear. From this position, the commander will be aware of the condition of the vehicles that may fall out because of mechanical failure and are able to provide for the drivers and any troops or cargo that they may be transporting. They will also be able to take charge at the scene of an accident involving drivers under their supervision until traffic accident instigation personnel arrive. Should the march unit be held up, the commander will be able to move up to the source of trouble and make the necessary adjustments.

NOTE: Convoy, serial, and march unit commanders should avoid driving in the left-hand lane because the limited speed of military vehicles can easily cause them to become a hazard to faster moving civilian traffic.

PACESETTER

The convoy commander will designate a pacesetter for the convoy. The pacesetter is the first vehicle in the march column and is normally the slowest, heaviest vehicle in the march column, excluding oversize/overweight vehicles The pacesetter will--

- Set and maintain the pace established by the convoy commander.
- Check the time at start points, critical points, checkpoints, and release points.
- Apprise the convoy commander of any obstacles or road hazards that confront the convoy (road blocks, washouts, or any other obstacle) and may cause a deviation from the established route.
- Control the convoy speed in preparation for exiting or entering highways and/or entering tunnels.

PREPARATION OF DRIVERS

The convoy commander, or his designate, ensures that--

- Drivers are aware of changes required by PERMITS prior to the convoy movement.
- Drivers and assistant drivers possess a valid Optional Form (OF) 346 (US Government Motor Vehicle operator's Identification Card).

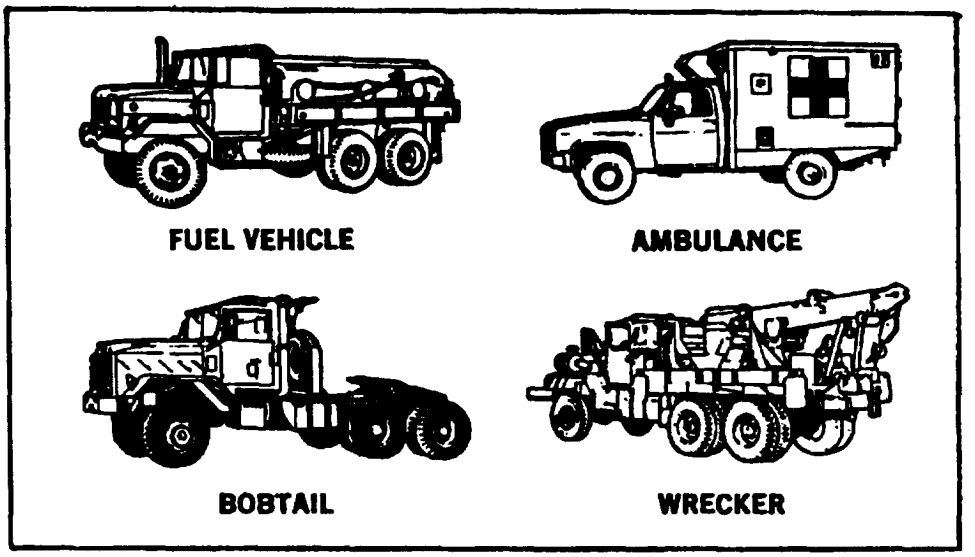


Figure 2-4. Equipment Included in the Trail.

- Only experienced drivers are selected to operate vehicles on public highways for convoy assignment, when possible. (This does not apply when a convoy is dispatched solely for driver training purposes.)

- Personnel with limited driving experience practice their driving before going on an expressway. This enables drivers to adjust to expressway driving and correct errors pointed out by supervisory personnel.

- Drivers have had 8 hours rest during the 12 hours before convoy departure time.

Convoy commanders also ensure that drivers are briefed thoroughly before the convoy departs. The following areas should be covered:

- Compliance with traffic signals.

NOTE: Military vehicles do not have the right-of-way over civilian traffic except under prescheduled emergency moves cleared and coordinated with state officals and escorted by police authorities.

- Route.

- Maximum and minimum speeds for segments of the route.

- Policing rest halts.

- Distance between vehicles (urban areas, expressways, conventional routes, and entrance and exit routes).

NOTE: To ensure an orderly movement, an established interval between vehicles must be maintained. These intervals are the time gaps between vehicles. A simple rule to use is the "4-second rule." This will establish an interval of 4-seconds between vehicles in the convoy. This interval can be maintained regardless of the speed of the convoy, and it allows for the space between vehicles to be adjusted as the rate of march changes. This 4-second time interval can be estimated if the driver of each vehicle watches the vehicle in front of him. As that vehicle passes a point on the highway (a definite point such as a sign post or tree), the driver counts the number of seconds until he passes that same point. This will give the time interval. Based on this time interval, the driver can either increase speed or decrease speed as required.

- Obedience to civil and military police and traffic escorts.

- Location and time of rest and meal halts.

- Destination and use of strip maps.

- Entering and leaving expressways.

- Emergency halts.

- Action to take if separated from the convoy.
- Use of highway warning kits.
- What to do if the vehicle breaks down.
- Refueling procedures.
- Phone numbers to call for medical and maintenance support and their locations along the route of march. All supervisory personnel must know this information.
- Communications to be used during the road march, for instance, radio, visual signals, sign messages, and audio signals.
- Avoidance of highway shoulders for halts except under emergency conditions.
- Location and identification of destination including name and phone number of the point of contact.
- Operation of headlights on low beam during the entire trip except when prohibited by local civil authorities.
- Security.

ASSISTANT DRIVERS

If possible, assign an assistant driver to each vehicle in the convoy. The assistant drivers must have in their possession a valid OF 346 for the type of vehicle that they are assigned to in the convoy. In addition to sharing driving time, the assistant driver will--

- Relay signals from the convoy commander to following vehicles.
- Check route and highway markers to ensure that directions contained on the strip map are being followed.
- Assist the driver to ensure that the lanes are clear when changing lanes, entering or exiting expressway ramps, or passing slow moving traffic.
- Observe the person driving for symptoms of fatigue.
- Perform duties to assist in the smooth, safe operation of the vehicle.

NOTE: The assistant driver does not "sleep" in the cab--he is there to assist the driver. The use of an assistant driver DOES NOT double the amount of driving time for the convoy.

CONVOY COMMUNICATIONS

Convoy and march unit commanders and NCOICs must be able to effectively communicate with their subordinate leaders and vehicle drivers. To be effective, communications used during convoy operations must be well planned and understood by all personnel involved in the movement. Radio is the principle means of communications within a motor convoy. It allows for the rapid transmission of orders and messages between widely separated elements in a convoy. Plans for its use must be given in orders, in the unit SOP, and in the movement plan.

VISUAL COMMUNICATIONS

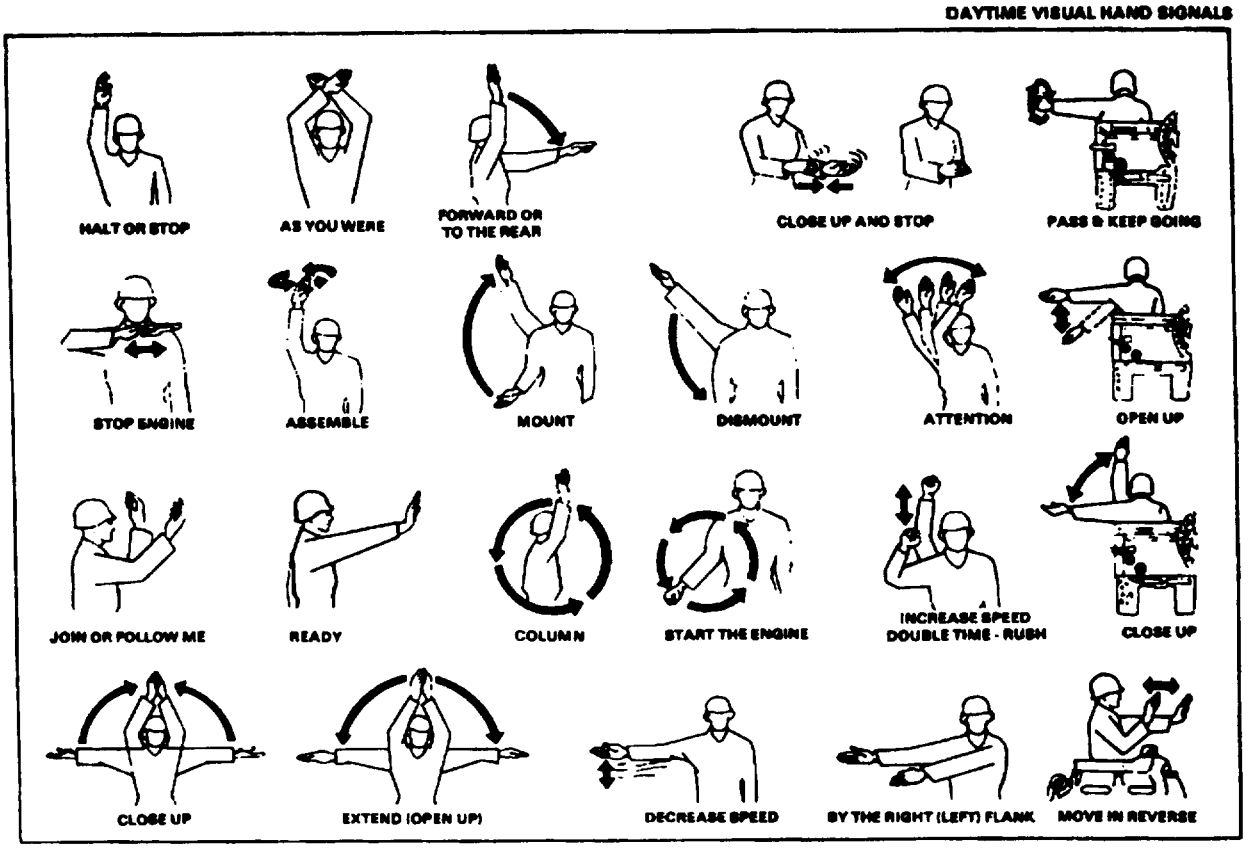
Sign messages may be written on a board and posted along the route or displayed by a guide in view of the oncoming vehicles. In the event of radio silence or for other reasons, the drivers or their assistants can use visual signals for convoy control (see Figure 2-5).

CIVILIAN POLICE TRAFFIC CONTROL

Obtain the assistance of civilian police whenever possible for all critical areas not on military reservations through which the convoy will pass. These areas include major intersections, entrances to and exits from expressways and main routes, densely populated and industrial areas, and entrances to and exits from rest halt areas. Request the installation provost marshall arrange for civilian police support in the immediate vicinity of the installation where the convoy originates. Request police support for more distant areas through the SMCC at the time the preplanned documentation (DA Forms 1265 and 1266) are submitted.

CAUTION

Instruct traffic guides that convoy drivers do not have priority over civilian traffic when not on a military reservation. And that they have NO authority to disregard traffic lights or other traffic devices on public roads.



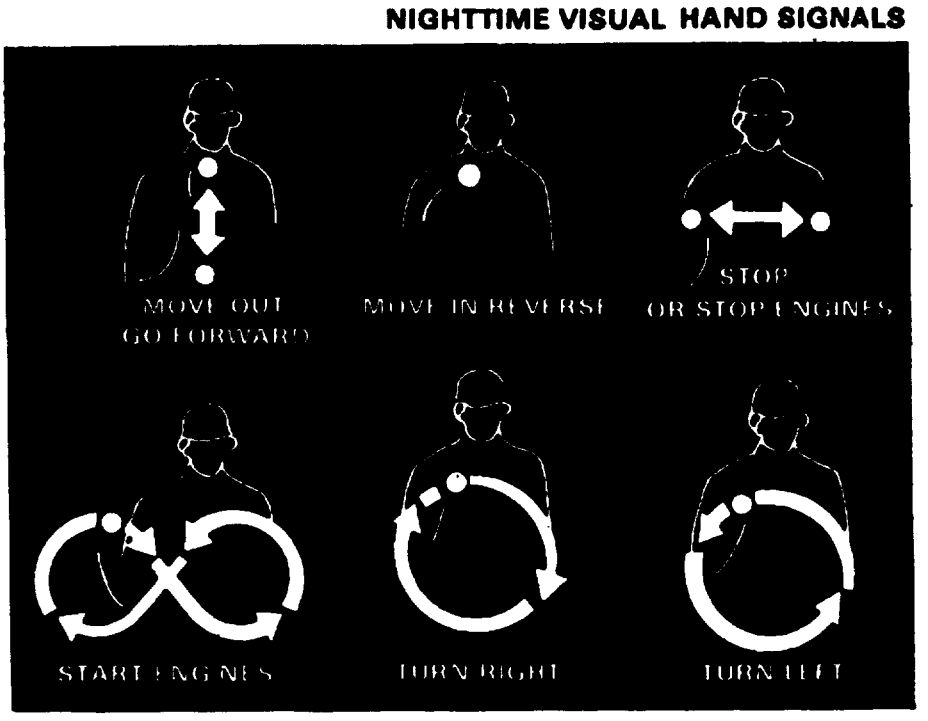


Figure 2-5. Daytime/Nighttime Visual Hand Signals.

CONVOY IDENTIFICATION

Each convoy will be identified by its CCN. For ARNG and USAR convoys, the SMCC in whose state the convoy originates assigns the CCN at the time that they prepare the convoy clearance request. This number will identify the convoy during its entire movement. The CCN will be placed on both sides of each vehicle and, if possible, on the front and back of all the vehicles in the convoy as shown in Figure 2-6. The CCN will also be placed on the top of the hood of the lead and last vehicles of each march unit.

For both peacetime and mobilization/deployment, the CCN will be an eight digit, three-part figure that will consist of the two-letter abbreviation of the issuing state (for example, VA for Virginia, KS for Kansas, CA for California, and so forth), a five-digit control number, and a one-digit type-of-movement designator such as oversize, overweight, or hazardous cargo.

CCNs are assigned in sequence on an annual basis. The first digit of the control number is the last digit of the calendar year; the next four digits are the numerical sequence of the convoy. The types of movement designators are outsize/overweight vehicles - S; explosives - E, hazardous cargoes - H, and all other convoys - C. For example, the eighty-first convoy originating in the state of Virginia in 1990 and carrying general cargo will be assigned the convoy number VA-00081-C.

For active duty units, the ITO provides the CCN through TC-ACCIS. There are ten digits in the CCN. The first two digits identify the post from which the tommy originates, the next four digits are the Julian date; the next three digits are the sequence number followed by a single digit type of movement designator. For example, FE 0234039 C would be a convoy leaving from Fort Eustis on 22 August 1990, it is the 39th convoy of the day, and it is a regular convoy without any special requirements.

CONTROL VEHICLE IDENTIFICATION

The first task vehicle (pacesetter) in each element of the convoy must have on its front, directly below the windshield or in some other conspicuous location, a sign with 4-inch black reflective letters on a yellow background reading CONVOY FOLLOWS. The last vehicle of each convoy element, other than the control vehicle, will have on the rear a sign reading CONVOY AHEAD. CONVOY AHEAD signs are not on maintenance or medical vehicles unless that vehicle's purpose is to represent the end of the convoy. The convoy signs will be prepared according to the specifications in Appendix F.

Mark each march unit of the convoy with flags 12 inches in height and 18 inches in length as follows:

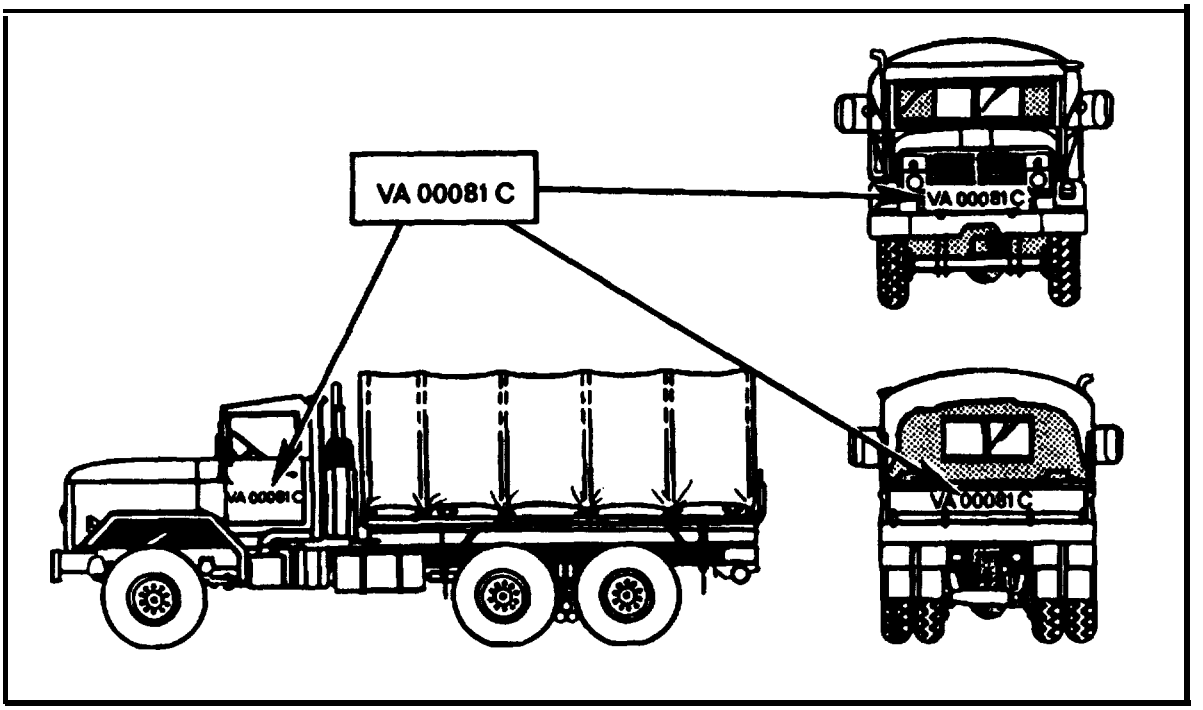


Figure 2-6. Placement of ARNG and USAR Convoy Clearance Number.

ŽThe lead vehicle is fitted with a blue flag and the rear vehicle with a green flag--mount the flag on left front of the lead and trail vehicle, respectively, so that it is will not interfere with the vision of the driver or with any functional component of the vehicle (see Figure 2-7).

ŽThe vehicles of the convoy commander and the march unit commanders must carry on the left front bumper a white and black flag. This flag is divided diagonally from the lower left corm to the upper right corner with the upper left triangle white and the lower right triangle black.

ŽTrail party vehicles will carry an international orange safety flag. State and local police or MP escort vehicles will not display convoy identification flags.

ŽA rotating or M-degree flashing amber light will be used for cranes (wreckers), oversize or overweight vehicles, and for the first and last vehicles in a convoy. The lights will be on at all times when the convoy is operating outside a military installation.

Convoy identification flags are available through local supply channels:

Leading vehicle flag NSN 8345-00-543-6912	Trail party vehicle flag
Last (rear) vehicle flag NSN 8345-00-543-6913	Commander's flag NSN 8345-00-543-6911

NOTE: There is a standard flagstaff attachment (NSN 8345-00-242-3650) that can be used for attaching the flags to the vehicles.

SAFETY EQUIPMENT AND WARNING DEVICES

While moving at night or during periods of reduced visibility, lead and rear convoy vehicles and those

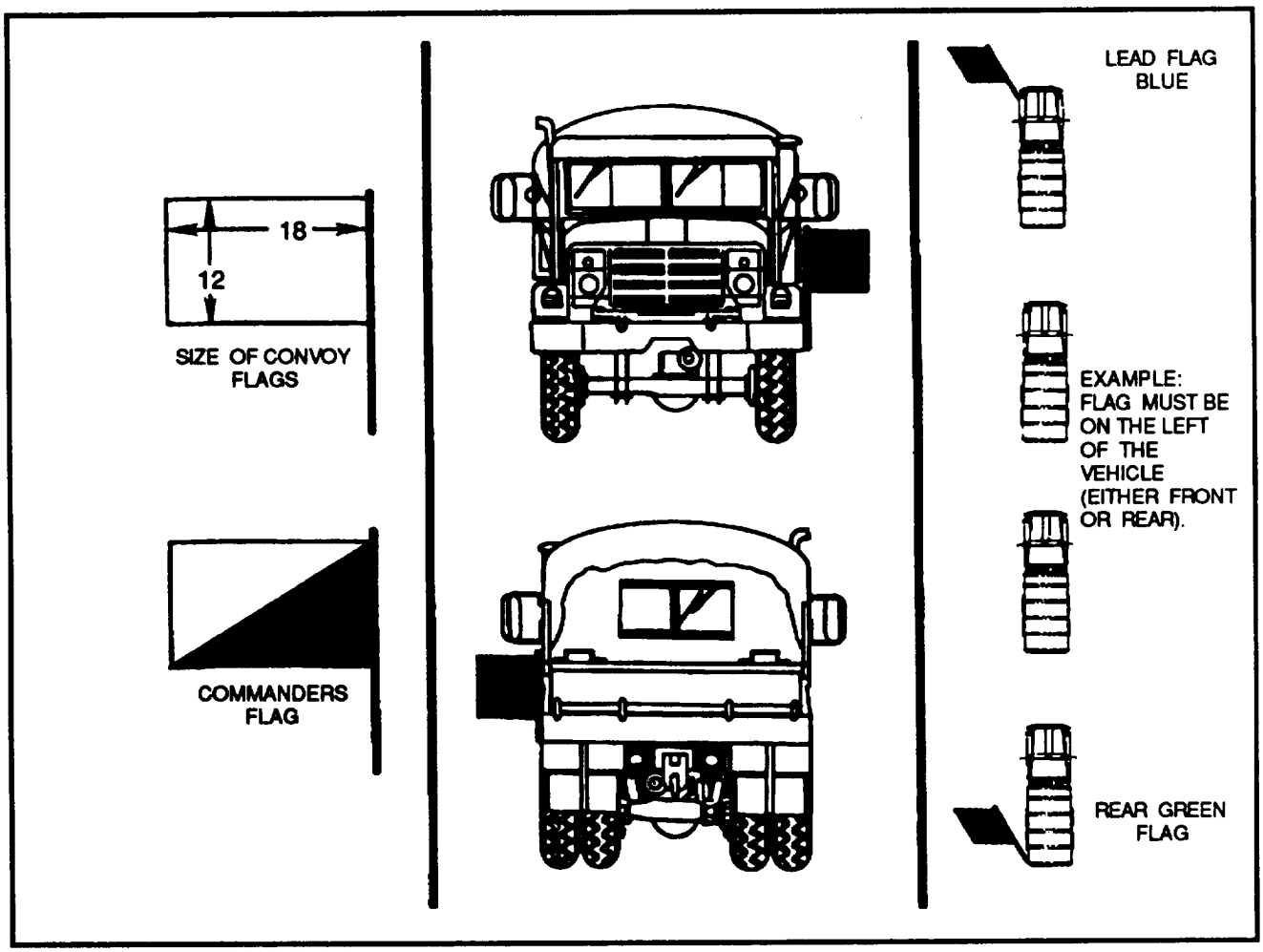


Figure 2-7. Flag Placement on a Vehicle.

oversize and overweight vehicles separated from the main body will operate four-way flashers. While operating at night or during periods of reduced visibility, convoy vehicles will display L-shaped symbols composed of a vertical strip, 12 inches long and 2 inches wide, or red retroflective paint, tape, or other reflective material placed at the lower corners of the vehicles body (refer to AR 55-29). See Figure 2-8 and Appendix F for specifications.

NOTE: The reflective material should be a removable material so that the camouflage paint and combat readiness of the vehicle is not compromised.

Headlights of aIl vehicles moving in convoy or halted on road shoulders must be on low beam at all times except where prohibited by state or local ordinances. While halted on shoulders, vehicles equipped with emergency flasher systems must also have these lights operating.

The following safety equipment is needed:

- ŽAll vehicles will be equipped with an approved fire extinguisher suitable for putting out gasoline and electrical fires.
- ŽAll vehicles must carry an approved first aid kit.
- ŽAll vehicles must have no less then one set (pair) of tire chains when snow or ice conditions maybe encountered.
- ŽBuses with a seating capacity of nine or more passengers must be equipped with a hand axe.
- Ž All convoy vehicles must be equipped with an approved highway warning kit shown Figure 2-9. In the event of an emergency, the placement of warning devices must be according to the paragraph in Chapter 3 titled HALTS DUE TO MECHANICAL FAILURE.
- ŽConvoy emergency vehicles will be fitted with an amber strobe light.
- ŽRoad guides must wear high visibility devices such as a traffic MP ensemble consisting of a vest (NSN 8415-00-177-4974) and/or sleevelets (NSN 8415-00-144-5011). Baton flashlights must aIso be provided when the convoy operates during darkness or when visibility is reduced to 500 feet or less.

NOTE: Flags and signs are not required for convoys of five vehicles or less. They will still display the CCNs on their sides and on the top of the lead vehicle's hood.

LOGISTICAL SUPPORT

Logistical support of convoy movements is a command responsibility. Prior to any convoy operation, the convoy commander MUST establish the plan for the support of his convoy. The convoy commander is the POC for coordinating all en route support. During the actual movement, the Local Support Agency (LSA) ensures that any unplanned logistical support required by the moving unit is provided.

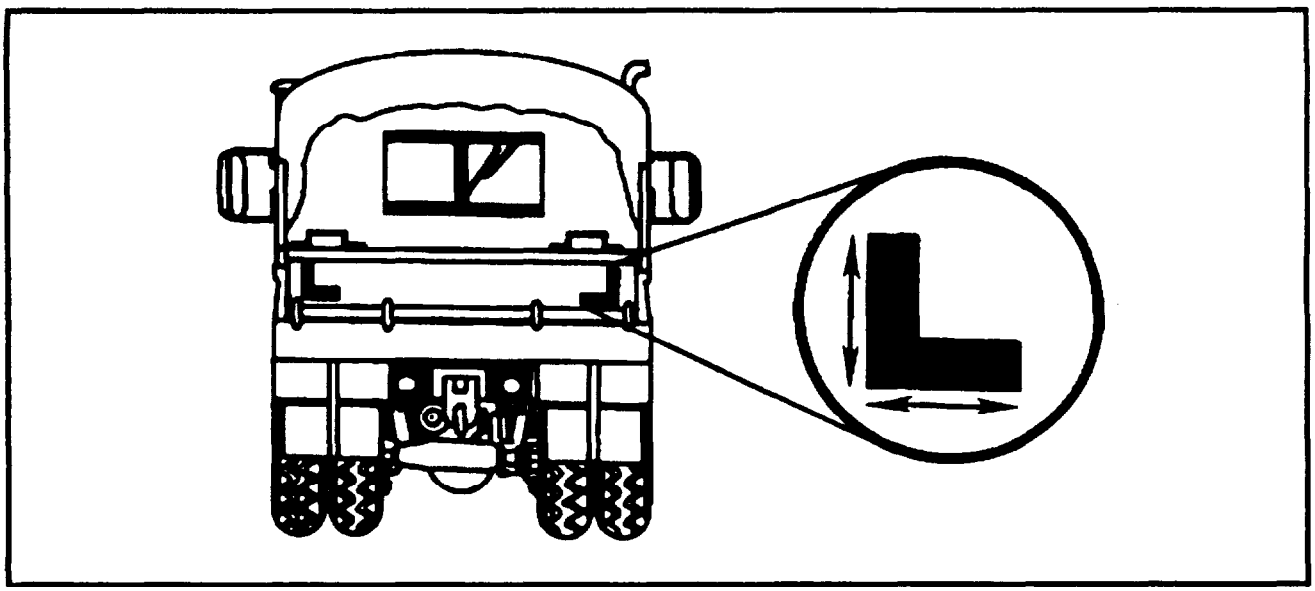


Figure 2-8. Reflective L-Shaped Symbol.

FINAL ACTIONS BEFORE DEPARTURE

Inspect all vehicles as they arrive in the convoy assembly area to ensure that they are in satisfactory condition. Notify units furnishing vehicles for a convoy as far in advance as possible. Advance notice will enable the units to thoroughly prepare the vehicles. Make on-the-spot corrections when possible. Check for--

- Mechanical condition, including brake system.
- Fuel, oil, and coolant levels.
- Serviceability of lights and horn.
- Tires (for serviceability and proper pressure).
- Availability of emergency equipment.
- Tire chains, when specified.
- Additional POL, when specified.
- Police of vehicle cargo or passenger compartment.
- Condition of driver.
- Driver's permit (OF 346) for authorization to operate assigned vehicle.
- Driver's individual equipment.

If deficiencies are detected that cannot be corrected on the spot, return the vehicle to the unit for replacement. No vehicle should be accepted in a "might make it" condition. After vehicles have been accepted for the convoy, they should be driven to the final assembly area for the CCN to be applied.

After vehicles and drivers have been inspected and the convoy is organized and ready to move out, assemble the personnel for a final briefing. Distribute strip maps to all drivers. Use an enlarged strip map (a blackboard drawing or other drawing) to explain details of the route. Conclude the briefing with a question and answer period.

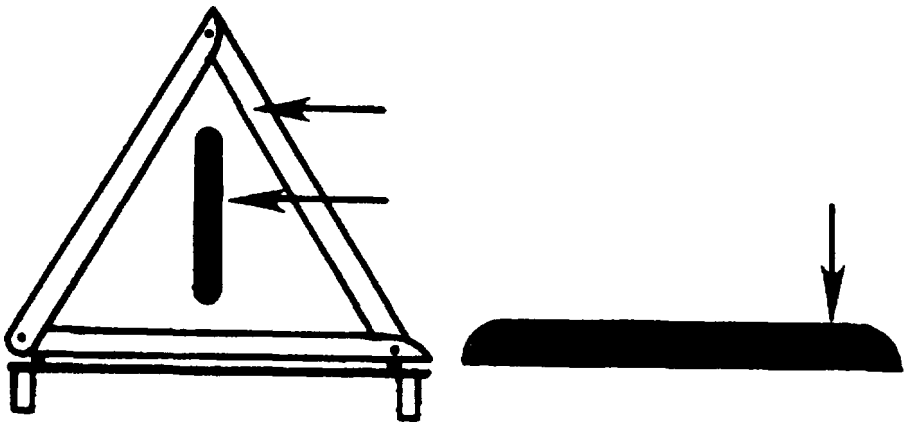


Figure 2-9. Highway Warning Kit.

CHAPTER 3

CONVOY OPERATIONS

ENTERING CONVOY ROUTES

Depart the assembly area at the time given in the movement order. Use police support to reduce interference with other traffic and to ensure that the integrity of the convoy is maintained. Use the "close column formation" when moving from the assembly area to the main convoy route.

NOTE: If a civilian police escort is not available, military police or other military personnel providing escort service have no authority to instruct military drivers to disregard traffic control devices or signs.

Main convoy routes are usually characterized by heavy, fast-moving traffic. Entering these routes is a critical operation. But the risk can be reduced when civilian police assist by controlling civilian traffic.

Most expressways are equipped with entrance and exit ramps and acceleration and deceleration lanes which are designed to allow vehicles to enter and leave without interfering with other traffic. When used properly, these lanes greatly reduce the risk of traffic accidents and help in the movement of the convoy The following instructions apply both to the initial point of entry to the expressway and the return to it from a rest halt area:

- When possible, obtain civilian police assistance to direct convoy vehicles onto the expressway and to control civilian traffic. When civilian police are not present, use MP or other military personnel to signal military vehicles when it is safe to enter the expressway. Military traffic should not interfere with civilian traffic.

- Before driving onto the entrance ramp, close up convoy vehicles to a maximum distance of 20 yards to reduce the time the entrance ramp is blocked to normal traffic (see Figure 3-1). Upon reaching the acceleration lane, increase convoy speed to equal as closely as possible that of other traffic on the expressway. The maximum speed authorized for military vehicles on expressways is 50 mph. Military vehicles moving on controlled access highways will maintain the posted minimum speed or 40 mph if a minimum speed is not posted. Vehicles that cannot maintain the posted minimum speed will be routed over an alternate noncontrolled access road (refer to AR 55-162). Do not exceed the minimum speed unless directed by the convoy commander. Under no circumstances will the posted maximum speed limit be exceeded.

- Before moving into the traffic lane, the driver must ensure that lanes are clear of oncoming traffic before merging.

- After entering the traffic lane, vehicle drivers should not immediately attempt to move to the prescribed distance for expressway convoy operations but continue for a distance equal to the road space of the column. Drivers should then gradually attain the distance between vehicles for expressway driving or as given by the operation order and the final briefing.

NOTE: Vehicles must not slow down or close up while in a traffic lane of the expressway.

DRIVING ON EXPRESSWAYS

Ensure that all vehicles remain in the right lane after the convoy has entered the expressway. Where the right lane is reserved for traffic turning off at the next exit ramp, the tommy should use the next adjacent lane, Drivers must be alert and prepared to slow down or take other evasive action to avoid vehicles entering the expressway from acceleration lanes.

If a vehicle develops mechanical trouble, the driver should turn on the appropriate turn signal to alert the vehicle behind him and move onto the shoulder of the road or into a parking area and wait for the arrival of the trail party. The remaining convoy vehicles should continue past the halted vehicle, leaving maintenance to be done by the trail party.

To avoid drowsiness or "highway hypnosis," encourage drivers to drive with cab windows open, to shift body positions, and to get out of the cab and move about at rest halts.

CAUTION

Instruct convoy vehicle drivers NOT to give "clearance signals" to civilian vehicle operators.. Responsibility to determine safe passing conditions rests with the driver desiring to pass.

EXITING AN EXPRESSWAY

To exit an expressway, either to enter a rest area or to take another route, move vehicles to the deceleration lane at the earliest opportunity and reduce speed to the exit ramp speed limit as shown in Figure 3-1.

REST AND MEAL HALTS ON CONVENTIONAL HIGHWAYS

Schedule rest halts so that the convoy will halt for 15 minutes at the end of the first hour of operation and 10 minutes every 2 hours thereafter. You can make minor adjustments to this schedule when a suitable area is not available at these time periods. On conventional highways with adequate off-shoulder packing space, rest and meal halts normally do not present a problem. However, take the following precautions:

- Do not select rest areas located in urban or heavily populated areas.
- Avoid areas on curves or reverse sides of hills.
- Leave enough room to allow the vehicles to park off the paved portion of the road and return to the road safely.
- Maintain a minimum distance of 3 feet between parked vehicles.
- Place warning kit devices at the head and tail of the column unless the vehicles are completely off the highway and shoulder. Leave the flashing warning lights in operation and the headlights on. Post a guard behind the trail party with proper warning devices to alert, but not direct, approaching traffic.
- Do not permit convoy personnel, with the exception of guards posted at the head and tail of each halted march element, on the traffic side of vehicles except to perform prescribed maintenance.
- Make sure drivers and assistant drivers perform prescribed at-halt maintenance and check the security of cargo. Deficiencies that cannot be corrected by the vehicle crew should be reported to the serial commander.
- Check drivers for illness and fatigue.
- Post guards at least 50 yards behind the last vehicle to warn traffic when departing a rest area. When police support is provided, this guard may not be required. Convoy vehicles should return to the highway as rapidly and safely as possible.

REST AND MEAL HALTS ON EXPRESSWAYS

Information on the location of rest areas and their truck parking capacities on expressways over which the convoy will move is available at your installation transportation office. The designated federal or state rest areas planned for convoy use should be entered in item 20 of DD Form 1265.

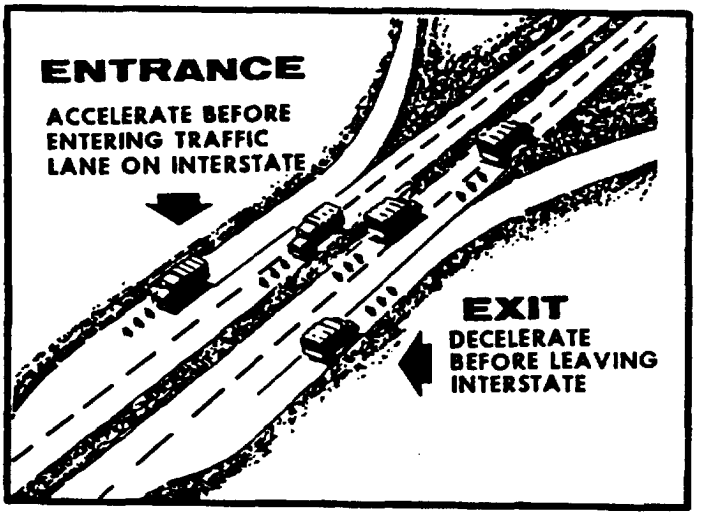


Figure 3-1. Entering and Exiting an Expressway.

Only emergency stopping is authorized on expressways. Official rest areas or parking areas may be used for scheduIed halts of military convoys. On most expressways, these areas are located at 25- to 30-mile intervals. Normally, separate parking areas within the rest area are designated for truck and passenger car parking. Use the portion reserved for trucks. Ensure that there is space for other vehicles convoy vehicles should not occupy more than 50 percent of the truck parking space at anytime. If the number of trucks in a convoy will exceed 50 percent of the truck parking area, organize the column into serials. Maintain a sufficient time gap between serials to allow one to clear a rest area before the following serial arrives. Or you may schedule convoy serials into different rest areas; however, this separates serials to such an extent that control is reduced.

Normally, acceleration lanes are provided at rest halt areas to facilitate merging of vehicles with other traffic. The same techniques are used when departing a rest area as when making an initial entry onto an expressway.

Meal halts on expressways require careful planning because of their longer duration. If the selected rest area cannot accommodate all of the convoy vehicles, you have a choice of four actions:

- Phase the convoy into a rest area in serials with enough time gap to allow the preceding serial to eat and clear before the arrival of the following serial.
- Have all serials halt at approximately the same time but at different rest areas. However, this will necessitate excessive gaps between elements, thus reducing the commander's control.
- Use the leapfrog method by requiring the first serial to halt at a rest area while the second serial continues on to the next area, usually 25 to 30 miles ahead. By the time the first serial has completed its halt and arrived at the area where the second serial stopped, the second serial should be ready to join the column.
- Depart from the expressway and use a previously selected area. This would allow all the personnel to make a meal halt at the same time.

REFUELING HALTS

The majority of military vehicles can travel 300 miles without refueling. Since this exceeds the distance a convoy normally travels in one day, arrangements for mass refueling before reaching the overnight halt are unnecessary. Refuel those vehicles with limited range during the noon meal halt as well as during regular refueling halts.

TOLL ROADS, BRIDGES, AND TUNNELS

Assign a convoy representative to clear the convoy at the initial entrance to toll facilities and any intermediate points where tolls are collected. When possible, obtain toll tickets before the convoy departs from its point of origin. When this is not feasible, the convoy representative should arrive at the toll facility entrance sufficiently in advance to purchase tickets and arrange for the uninterrupted movement of the convoy through the toll facility.

HALTS DUE TO MECHANICAL FAILURE

A vehicle disabled because of mechanical failure should immediately be moved from the traffic lane to a location where it will not be a hazard to other traffic. If a breakdown occurs while driving on an expressway or highway, the driver should perform the following actions immediately:

- During the time that lights are required (sunset to sunrise) and when forward visibility is reduced to 500 feet or less, place a reflector either in the obstructed lane or on the shoulder of the road if the vehicle is on or over the shoulder. Place the reflector to face the traffic using that lane. Do this before any attempt is made to repair the vehicle. Place reflectors in the following order
  - One reflector in the center of the lane of traffic occupied by the vehicle and not less than 40 paces (approximately 100 feet) from it in the direction of traffic approaching in that lane (see Figure 3-2). If the vehicle is on or over the shoulder and does not occupy a traffic lane, the warning device should be placed on the edge of the roadway so that the traffic lane is not blocked.
  - One reflector on the traffic side of the vehicle, four paces (approximately 10 feet) to its rear facing the traffic in that lane.
  - One reflector 40 paces from the vehicle in the opposite direction.
  - If the vehicle is stopped within 300 feet of a curve, crest of a hill, or other obstruction to

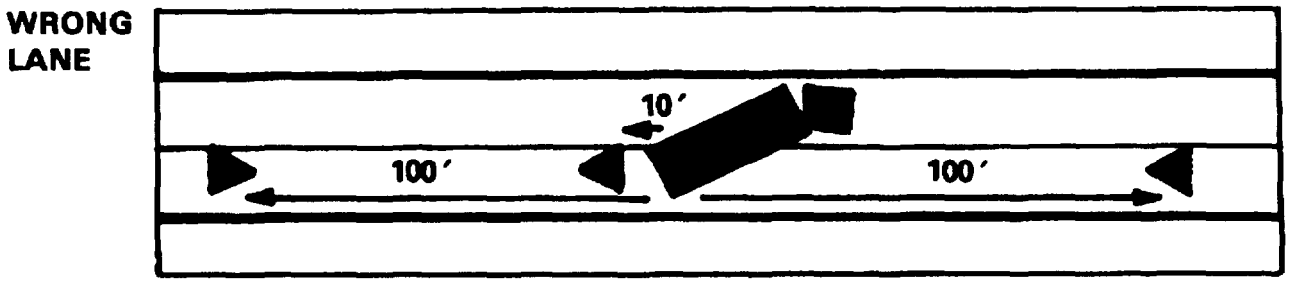


Figure 3-2. Vehicle Stopped, Blocking Two Lanes.

view, the warning device in that direction should be placed so as to give ample warning to other users of the highway, but not less than 80 paces nor more than 120 paces from the vehicle (see Figure 3-3).

- During the time lights are not required (normally sunrise to sunset), place red flags or reflectors with mounted flags at the distances prescribed for night. Since most warning kits contain only two flags, the reflector placed 10 feet behind the vehicle will not have a flag mounted on it. DO NOT use military personnel to warn drivers by manual flagging except where emergency warning devices do not give adequate warning to civilian traffic.

ACCIDENT PROCEDURES

In the event of an accident, you must make every effort to minimize its effects and keep the convoy moving. If an accident happens in your convoy--

- Keep moving. Only the vehicle immediately behind the vehicle should stop and render assistance.

- Give first aid. Give immediate attention to injuries according to FM 21-11.

- Wait for assistance. Do not move the damaged vehicle until an accident investigation has bees completed by civilian police, Report any accident to civilian police according to AR 385-40.

- Clear the traffic lane. The crew of the affected vehicle should make every effort to clear the traffic lane as soon as possible. In case of injuries, the crew of the assisting vehicle may be required to move the damaged vehicle.

- Prepare report. Whenever a military vehicle is involved in ANY accident, the driver will prepare a SF 91 (Operator's Report of Motor Vehicle Accident). (See Appendix G.)

On-the-spot information will be recorded on the form by the operator involved. If the operator is unable to prepare the report at the scene of the accident, it will be prepared by anyone so directed. The report must be completed and delivered to the operator's immediate supervisor as soon as possible for use in preparing DA Form 285 (Accident Investigation Report).

Whenever state or local regulations require submission of accident reports to their agency, the report will be submitted first to the appropriate claims officer for review to ensure that the rights of the United States government are not prejudiced by admission of liability.

It is essential that personnel be trained to obtain all vital information at the scene of the accident and to complete all entries on the form. Information will often be unavailable after witnesses have left or vehicles have been removed from the scene of an accident.

Each item of the report should be checked to make sure it gives a complete picture of facts leading to the accident and what occurred in the accident. If there is any question as to the validity of information obtained for the report, anotation should be made to this effect.

NOTE: When another driver is involved in the accident, his name should be obtained from his driver's permit.

The first officer or noncommissioned officer to arrive at the scene of the accident will take charge by supervising emergency aid, directing military traffic, warning civilian traffic, and directing placement of warning devices until the trail officer arrives. The trail officer, aided by available medical and maintenance personnel, will supervise and direct care of the injured and disposition of the damaged vehicles. Further assistance

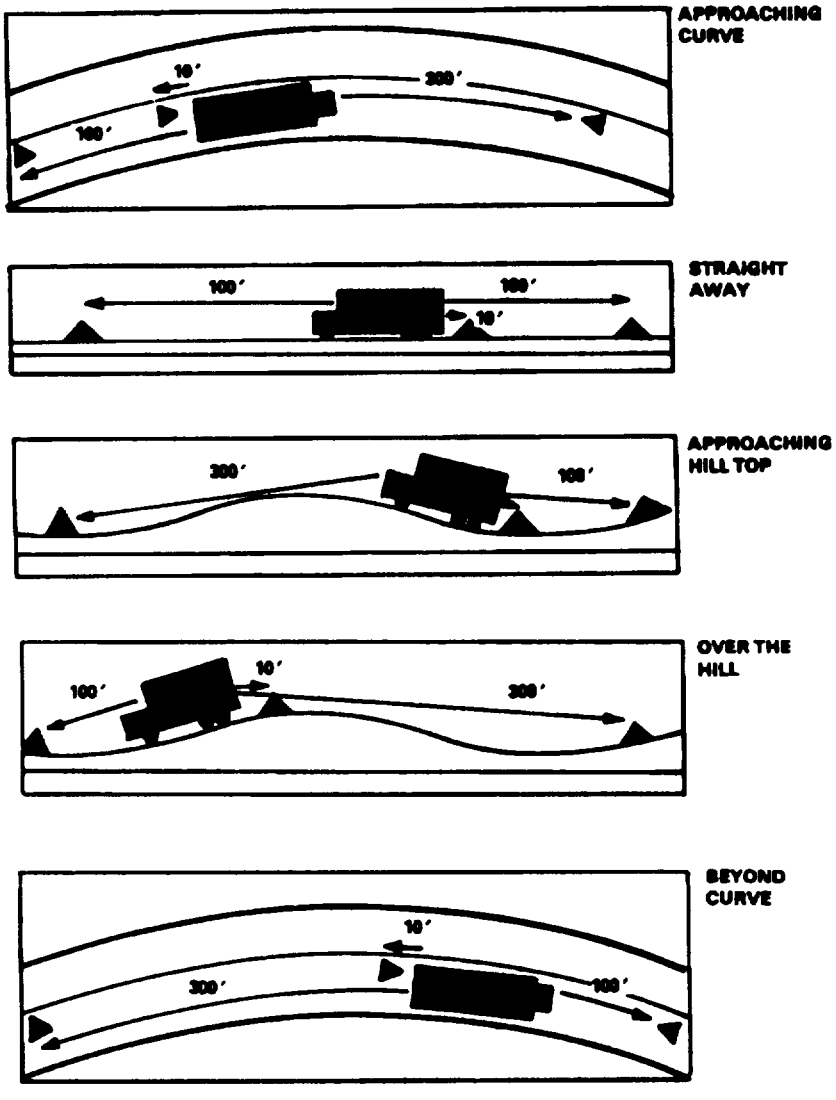


Figure 3-3. Halts Under Varying Conditions Due to Mechanical Failure.

needed should be requested from the agencies listed in the convoy operation order.

VEHICLE ACCIDENTS CAUSING A FIRE OR CREATING AN ELECTRICAL OR FIRE HAZARD

Motor convoys travel mostly over highways in rural areas. Fire departments in these areas are widely scattered, and firefighting personnel may have to travel a long distance to respond to an emergency. This means that convoy control personnel will probably be the first to arrive at the scene of the accident and must be prepared to rescue endangered personnel, attempt to control the fire, or take steps to prevent a fire.

If the accident results in a vehicle fire, convoy supervisory personnel will--

- Halt the control vehicle a safe distance from the fire and direct the driver or other convoy personnel to notify the nearest fire department and police department, using the most expeditious means; for example, roadside emergency, service station, or private residence telephone. If radio communication is available, notify the convoy commander.

- Remove injured personnel from burning vehicles as quickly as possible, even when it means subjecting a person to further injury. Follow established first aid procedures in caring for the injured before attempting to control fire in unoccupied vehicles.
- Keep spectators at a safe distance.
- Attempt to extinguish the fire with the control vehicle extinguisher, extinguishers from other vehicles, or with sand or mud.

Or in the event of an accident involving a truck carrying either explosives or hazardous cargo, you must--

- Approach cautiously. Resist the urge to rush in, you cannot help others until you know the hazards.
- Move and keep people away from the scene.
- Use the Emergency Response Guidebook (DOT 5800.4) as a guide.
- Immediately notify all assisting agencies and personnel of the hazards involved.

Or if the accident results in a fire hazard, convoy supervisory personnel will---

- Halt the control vehicle a safe distance from the accident and direct the driver or other convoy personnel to notify police and fire departments by the fastest means. When radio communication is available, notify the convoy commander.
- Turn off the ignition and tights of the vehicles involved. Because of the possibility of sparks, do not remove battery cables unless absolutely necessary.
- Remove injured personnel as soon as possible.
- Keep spectators away from the area where flammable liquids are spilled or toxic fumes have accumulated.
- Guard against smoking by spectators or cigarettes thrown from passing vehicles If personnel are available post guards to warn passing vehicle drivers of a fire hazard.
- Notify nearby residents when spillage may place them in danger.

Or if the accident involves high-tension power lines, an extremely dangerous situation exists. The danger is even greater when the downed lines are touching a vehicle. Convoy supervisory personnel will--

- Contact poke immediately and explain the situation. The police will be able to contact power company personnel for emergency assistance more quickly than convoy personnel.
- Keep spectators at least 100 feet from downed wires.
- If wires are touching any of the vehicles involved, direct the occupants to remain in place until power company workers can cut off the electricity and remove the wires.
- In case of serious injury where death may be imminent unless rescue is effected, attempt to remove the wires, assist the injured from the vehicle, render first aid, and obtain medical assistance.

WARNING

The following procedures are NOT routine and should be considered only when death may otherwise result:

- Remove the wire from the vehicle by looping a completely dry fiber or cotton rope around it and pulling it free.
- Lift the wire from the vehicle using a completely dry-seasoned wooden pole.
- Reduce the risk of electrical shock by standing on a rubber vehicle floor mat, dry wooden planking, or other nonconductive material. Rescue personnel must be aware that the ground in the immediate vicinity of where a hot wire is touching may be charged and should be avoided.

CONVOY COMMANDER'S EN ROUTE REPORT TO CLEARANCE AUTHORITY

During peacetime, administrative convoys will not normally be required to report their movement progress at

origin, en route, and destination. If it is required, then the convoy commander will provide an en route report to the next higher headquarters. During mobilization and selected exercises, special instructions included with the approved convoy clearance will direct the convoy commander to report to the appropriate headquarters upon departure, at selected halt locations, and upon arrival. The en route report will outline the position of the convoy. If the convoy requires more than one day, the report should contain as a minimum--

- Time of arrival at overnight stop.
- Estimated time of arrival at state lines on the following day.
- Complete details and circumstances of any accident or incident.
- Highway clearance number and convoy commander's name.

By Order of the Secretary of the Army:

CARL E. VUONO
General United States Army
Chief of Staff

Official:

PATRICIA P. HICKERSON
Colonel, United States Army
The Adjutant General

DISTRIBUTION:

Active Army, USAR and ARNG: To be distributed in accordance with DA Form 12-11E, Requirements for FM 55-312, Military Convoy Operations in the Continental United States (QTY rqr block no. 1207).

☆U.S. Government Printing Office: 388-421/02486

APPENDIX A

CONVOY CLEARANCE (DD FORM 1265) AND SPECIAL HAULING PERMIT (DD FORM 1266)

REQUEST FOR CONVOY CLEARANCE			DATE HSTDD OF MOBILIZATION
SECTION I—GENERAL			
1. ORGANIZATION Unit Designation and Unit Identification Code	2. STATION Home address of unit (Full Mailing Address with Zip Code)		3. CONVOY COMMANDER Full Name, Rank of NCO or OFFICER TOE/TDA Para/Line
4. PERSONNEL STRENGTH a. OFFICER: Convoy b. ENLISTED: Strength	5. POINT OF ORIGIN Starting Point of Convoy (SP) (Include City and State)		6. DESTINATION Release Point (RP) (Include City and State)
7. DATE AND TIME	7a. DEPARTURE HSTDD w/TIME	7b. ARRIVAL HBSAD w/TIME	8. RATE OF MARCH MLR/Max Catch-up Speed (MPH)
SECTION II—CONVOY COMPOSITION			
9. NUMBER OF EACH TYPE OF VEHICLE AND DESCRIPTION *(Include towed equipment)* List of vehicles by type and model number. Include total number of each type, and match vehicles with respective assigned trailers.			
10. TOTAL NUMBER OF VEHICLES Does not include towed equip	11. NUMBER OF OVERSIZE/ OVERWEIGHT VEHICLES	12a. NO. OF SERIALS	12b. TIME INTERVAL 10 minutes between serials
13a. NO. OF MARCH UNITS	13b. TIME INTERVAL 5 minutes between march units		
SECTION III—ROUTE DATA			
14. PROPOSED ROUTING *(Include US Routes, State Routes, etc.)* List street/highway/road routing in order of usage from Starting Point (SP) to Release Point (RP).			
15. ETA AND ETD AT STATE LINES, MAJOR ROAD JUNCTIONS, MAJOR BRIDGES AND TUNNELS, METROPOLITAN AREAS AND OVERNIGHT HALT SITES *(Continue on a separate sheet if additional space is required)*			
LOCATION	ETA	DATE	ETD / DATE
List location and duration of each and Critical Points.	Halt	M+ Date	M+ Date
SECTION IV—LOGISTICAL DATA			
16. BRIEF GENERAL DESCRIPTION OF CARGO *(Brief general description; i.e., organizational impediments, etc.) (Within security limitations)* List general discription of cargo. Examples: Troops with or without weapons Any sensitive documents Tankers filled or empty			

DD Form 1 JAN 80 1265

Figure A-1. Sample DD Form 1265 (Front).

17. ARE EXPLOSIVES TO BE TRANSPORTED? ☐ YES ☐ NO *(If YES, describe below)*

CLASS	AMOUNT	DESCRIPTION	VEHICLES TO BE USED	
			NO.	TYPE
Refer to FORSCOM REG 55-1 Page 14 Para 5-5 a&b				

18. STATEMENT WHY EXPLOSIVES CANNOT BE TRANSPORTED COMMERCIALLY *(Movements involving explosives and/or other dangerous articles are required to comply with all applicable regulations or directives)*

Refer to FORSCOM REG 55-1 PARA 5-5 a & b

19. LOGISTICAL SUPPORT REQUIRED AT OVERNIGHT HALT SITES? ☐ YES ☐ NO *(If YES, complete the following) (Use separate sheet if additional space is required)*

DATE	INSTALLATION	GAS (gals.)	OIL (gals.)	RATIONS	BILLETS	OTHER
Does DA Road	March Policy Apply? Ref. 55-1 PARA 7-4a (1)					

20. REMARKS

This block is to be used to inform the chain of command of any unique requirements of the convoy.

IE: Planned location of fuel and meal halts.
Types of radios.
Specific support requirements
List each oversize/over weight vehicles (truck or truck trailer combinations) with load description.

NOTE: Enter name, rank, telephone number of point of contact (POC) during normal duty hours.

21. REQUESTING AGENCY		22. APPROVING AGENCY	
Unit Designation		SMCC State of Origin	
23. REQUESTED BY *(Typed name, grade and title)*		24. APPROVED BY *(Typed name, grade and title)*	
UMO or Alternate UMO		DMC State of Origin	
25. DATE	26. SIGNATURE	27. DATE	28. SIGNATURE
Of Request	UMO Primary or Alternate	Of Approval	DMC State of Origin

INSTRUCTIONS: In cases where bona-fide emergencies exist, the information contained on DD Form 1265 and DD Form 1266 may be transmitted to the appropriate headquarters by telephone or electric transmission. In this event, reference will be made to item numbers in the sequence in which they appear on the form. Items which do not apply will be so indicated.

Figure A-1. Sample DD Form 1265 (Back) (Continued).

REQUEST FOR SPECIAL HAULING PERMIT

DATE: 1 May 199X

SECTION I - GENERAL

1. ORGANIZATION	2. STATION	3. DATE OF MOVEMENT	
		a. STARTING	b. COMPLETION
508th Trans Co (Mdm Trk)	Fort Eustis, Virginia 23604	0700 15 May 199X	1830 16 May 199X

4. POINT OF ORIGIN	5. DESTINATION
FORT EUSTIS, VIRGINIA	FORT DRUM, NEW YORK

6. ARRIVAL AT STATE LINES

DATE	TIME	STATE LINE
15 May 9X	1308	VA/MD
15 May 9X	1440	MD/PA
16 May 9X	1145	PA/NY

7. ROUTING (*Stipulate US Routes, State Routes, etc.*)

IS 64, VA 168, VA 33, IS 64, IS 95, IS 495E, US 1, IS 695, IS 83, IS 81, US 11

8. ESCORT REQUIREMENTS

None

SECTION II - VEHICLE AND LOAD DATA

DESCRIPTION (a)	TYPE (2-ton etc) (b)	NO. OF VEHICLES (c)	REGISTRATION NUMBER (d)	HEIGHT (e)	WIDTH (f)	LENGTH (g)	WEIGHT (h)
9. VEHICLE							
A. TRUCK							(Empty)
B. TRUCK-TRACTOR	10-ton	1	9B9999	112	122	289	(Empty) 29,658
C. TRAILER							(Empty)
D. SEMI-TRAILER	25-ton	1	8T8888	66.5	115	418.5	(Empty) 16,286
E. OTHER (*Specify*)							(Empty)
10. LOAD				123	133	225.5	(Empty) 49,250
11. OVERALL (*Vehicle and load*)				158	133	648	(Empty) 95,194

12. DESCRIPTION OF LOAD (*Brief general description: Organization impediments, etc.*) (*Within security limitations*)

13. LOAD OVERHANG	a. FRONT	b. REAR	c. LEFT SIDE	d. RIGHT SIDE
	None	None	9 inches	9 inches

DD Form 1266, JAN 59

484/160

Figure A-2. Sample DD Form 1266 (Front).

14 NUMBER OF AXLES	(1) A	(2) B	C	D	E	F	G	

	AXLE 1 a	AXLE 2 b	AXLE 3 c	AXLE 4 d	AXLE 5 e	AXLE 6 f	AXLE 7 g	AXLE 8 h	TOTAL i
15 NUMBER OF TIRES	2	4	4	4	4				18
16. TIRE WIDTH *(Inches)*	28	56	56	56	56				
17. TIRE SIZES	1400x24	1400x24	1400x24	1100x15	1100x15				
18. AXLE LOAD *(Empty)*	12,650	10,992	10,992	5,655	5,655				45,944
19. AXLE LOAD *(Loaded)*	15,230	20,943	20,943	19,039	19,039				95,194

20. AXLE SPACING *(See item 14 for identification)*	A SPACING	B SPACING	C SPACING	D SPACING	E SPACING	F SPACING	G SPACING	
	151	60	185	42				

21. REMARKS

22. MOVEMENT BY HIGHWAY IS ☐ ESSENTIAL TO NATIONAL DEFENSE ☒ IN THE INTEREST OF NATIONAL DEFENSE

23. REQUESTING AGENCY	24. APPROVING AGENCY
508th Trans Co (Mdm Trk)	
25. REQUESTED BY *(Typed name, grade and title)*	**26. APPROVED BY *(Typed name, grade and title)***
Charles C. Chestnut,CPT,TC,Commanding	

27. DATE	28. SIGNATURE	29. DATE	30. SIGNATURE
1 May 9X			

INSTRUCTIONS

GENERAL:

DD Form 1266 "Request for Special Hauling Permit" will be used to obtain special hauling permits for the movement of oversize/overweight vehicles over public highways when accompanying a convoy or when traveling separately.

This form, in duplicate and accompanied by letter of transmittal, will be forwarded through the local transportation officer so as to reach the appropriate headquarters not less than ten (10) working days prior to the starting date of the movement. Letters of transmittal will contain complete itinerary and explanation of the movement. One (1) letter of transmittal is sufficient when several DD Forms 1265 and 1266 involving one (1) movement are forwarded to the appropriate headquarters.

In cases where bona-fide emergencies exist, the information contained in this form and DD Form 1265 may be transmitted to the appropriate headquarters by telephone or electric transmission. In this event, reference will be made to item numbers in the sequence in which they appear on the forms. Items which do not apply will be so indicated.

SPECIFIC:

Item 9A, B, C, and D - Complete nomenclature of vehicles involved. More than one unit may be included, provided units are identical in equipment, load characteristics, routing and movement date. Total number of units shall be indicated prominently.

Item 9E - Note all units other than standard highway vehicles; road equipment, guns, etc.

Item 9 (d) - Indicate the registration number for each unit or combination of units. Use additional page if required.

Item 14 - Indicate appropriate number of axles by inserting number in proper circles. Black out circles not applicable.

Item 21 - For movement through the District of Columbia, include name of manufacturer of equipment.

DD Form 1266 Reverse, JAN 59

Figure A-2. Sample DD Form 1266 (Back)(Continued).

APPENDIX B

MILITARY VEHICLE AXLE WEIGHT DISTRIBUTION FORMULAS AND PERCENTAGES*

Vehicle weight scales are not always available to military field units prior to moving buck convoys over CONUS public highways. Therefore, laded-vehicle axle weight distribution formulas and percentages have been developed to help units prepare DD Forms 1265 and 1266 using estimated axle loads.

Percentages of maximum gross vehicle weight (GVW) are given for estimating the axle weight distribution for a loaded vehicle. When possible, however, actual axle loads, obtained by weighing the loaded vehicle, should be used.

LIMITATIONS

Percentages can be used for any loaded cargo truck and tractor- semitrailer combination. However, to use them for determining vehicle rude load distribution, the following data must be available:

- Technical manuals (TMs) or vehicle data sheet for the particular cargo truck, tractor, and semitrailer.
- Weight of empty vehicle.
- Weight of payload.
- Other necessary dimensions are obtained from vehicle TM or data sheet.

*Formulas and percentages in this appendix are used in lieu of American Trucking Association (ATA), Inc., weight limits only when ATAs (see Appendix C) are not available.

PROCEDURE

To use the percentages for determining axle weight distribution follow these steps.

Step 1. Determine GVW.

Step 2. Choose applicable percentages from the table for the number of axles and type of vehicle (See Figure B-1.)

Step 3. MultiplyGVW by each percentage to determine various axle weight distributions.

Step 4. Record each weight.

Example The percentage method. The GVW for an M 123/M172A1 tractor-semitrailer combination is 96,500 pounds. This is a five-axle vehicle. Therefore, in the first column labeled “Number of Axles per Vehicle," find 5. To the right of 5 under “Type of Vehicle" is semitrailer and under the "Axle 1“ column is 14. Multiply the GVW by 14 patent to find the front axle weight distribution. The "Axle 2“ and "Axle 3“ columns show 21 percent. Multiply the GVW by 21 percent to determine the weight distribution on each of the second and third axles. The "Axle 3“ and "Axle 4“ columns show 22 percent. Multiply the GVW by 22 percent to determine the weight distribution on each of the fourth and fifth axles. Record each axle weight distribution.

GVW for M123/M172A1 = 96,500 lb

GVW = 96,500 lb x 14 percent= 13,510 lb (front axle weight distribution)

GVW - 96,500 lb x 21 percent = 20,265 lb (2d and 3d axle weight distribution)

GVW=96,500 lb x 22 percent = 21,230 lb (4th and 5th axle weight distribution)

Number of Axles per Vehicle	Type of Vehicle	Axle 1	Axle 2	Axle 3	Axle 4	Axle 5	Axle 6
3	1-1/4-ton	38	31	31			
	2-1/2-ton	32	34	34			
	5-ton	26	37	37			
	10-ton	24	38	38			
5	Semi-trailer	14	21	21	22	22	
6	Semi-trailer	8	22	22	16	16	16

Figure B-1. Percentage for Axle Weight Distribution.

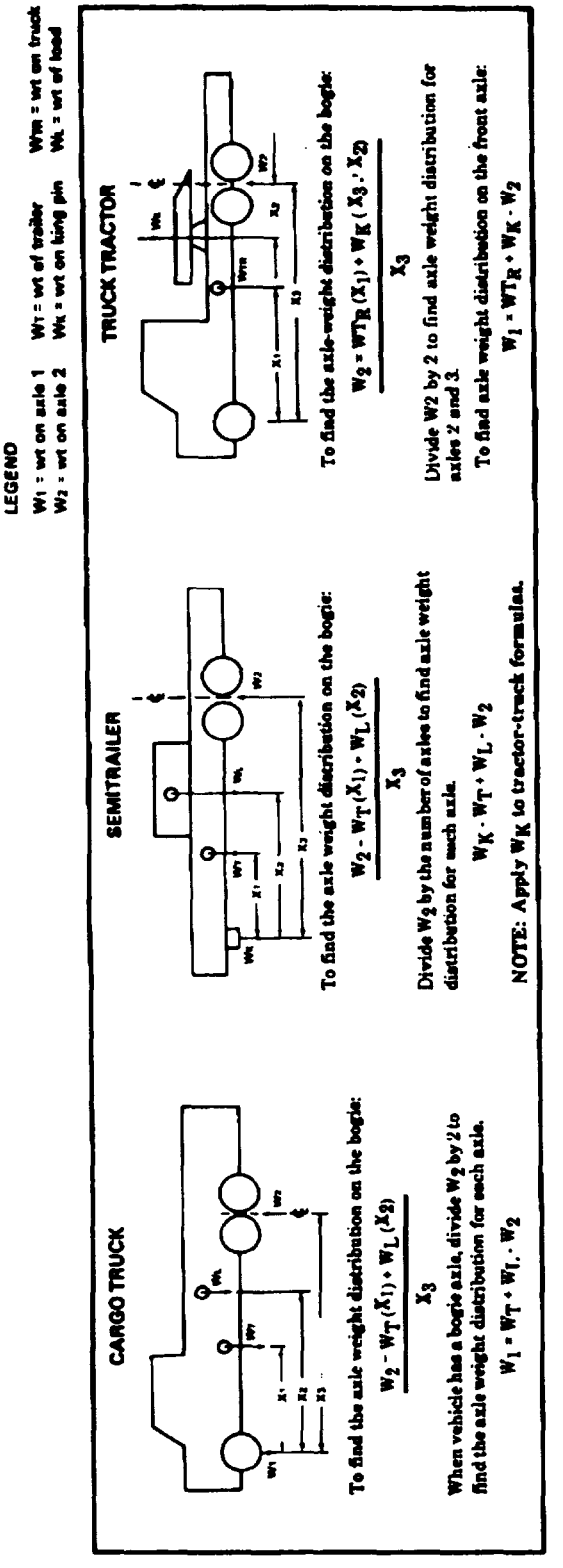


Figure B-2. Formulas for Axle Load Weight Distribution.

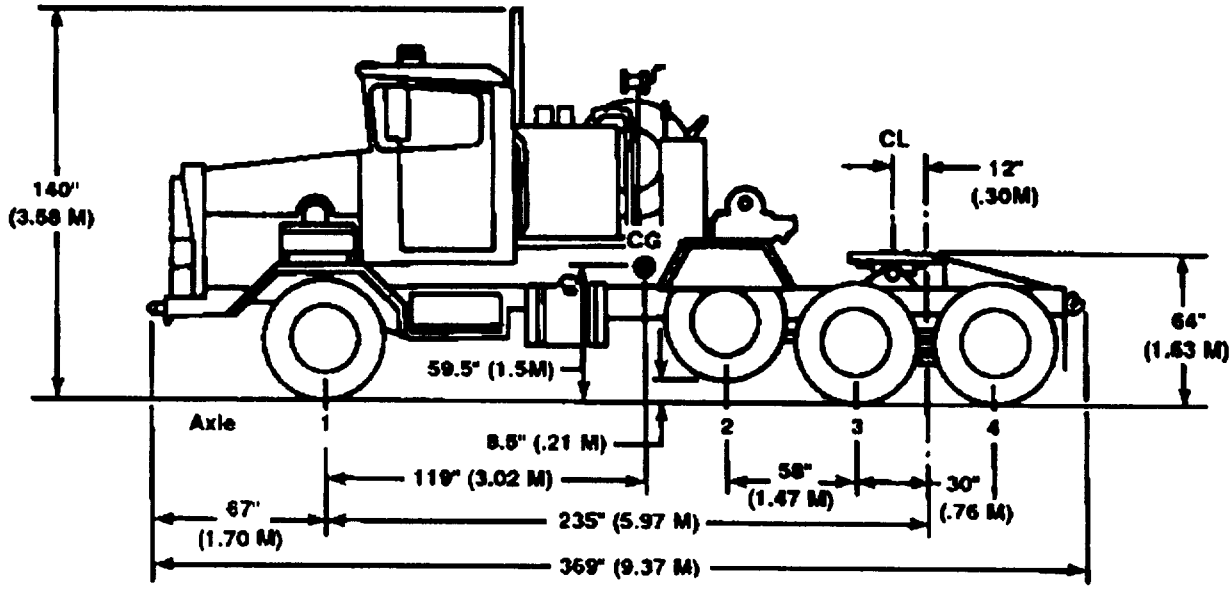
APPENDIX C

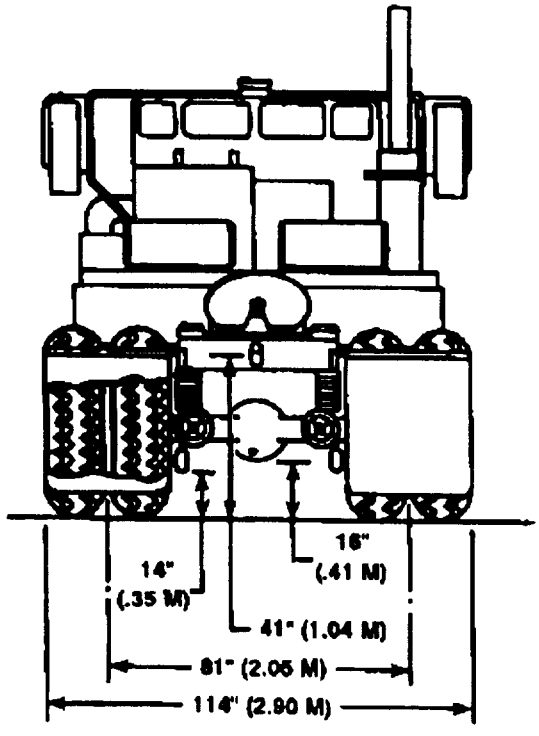
VEHICLE CHARACTERISTICS AND WEIGHT DISTRIBUTION DIAGRAMS FOR THE HEAVY-EQUIPMENT TRANSPORTER (HET)

This appendix provides the characteristics data on the HETs and selected oversize/overweight vehicles used as payload cargo. This transportation information is provided to assist in making up the DD Form 1266 and also for use in evaluating requests for oversize/overweight permits.

The dimensions for the vehicle combinations will not vary; however, calculated axle loads may vary. The variance will be due to the different positioning of the load item on the transporter and differing air pressurt at the pusher axles.

If additional information on these diagrams is required, or if you have comments, please write to Commander, MTMC Transportation Engineering Agency, ATTN: MTT-TR, P.O. Box 6276, Newport News, VA 23606-0276.



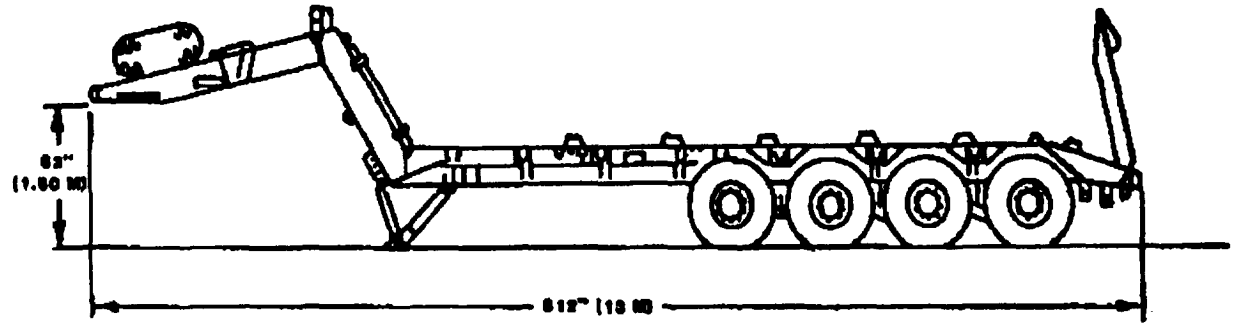


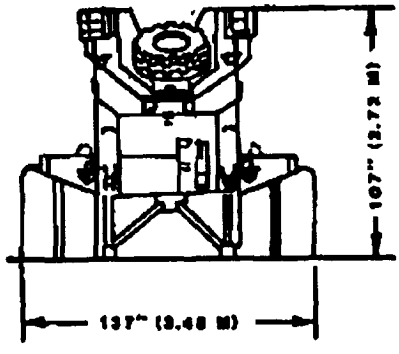
	Axle			
	1	2	3	4
Tire Size	14.x24	14.x24	14.x24	14.x24
Tire Pressure (psi)	95	95	85	85
Capacity (lb)	23,000	25,000	65,000	
Tires per Axle Footprint	2	2	4	4
Tire Width per Axle (in.)	20	20	38	38

Pusher Axle (2) should be pressurized to 80 psi when towing trailer w/load.

Curb weight (lb) 39040

Figure C-1. M911 Truck Tractor.





	AXLE			
	1	2	3	4
TIRE SIZE	16.X19.5	16.X19.5	16.X19.5	16.X19.5
TIRE PRESSURE (PSI)	80	80	80	80
TIRES PER AXLE	4	4	4	4
AXLE CAPACITY (LB)	20000	20000	20000	20000
TIRE FOOTPRINT WIDTH PER AXLE (IN.)	40	40	40	40

CURB WEIGHT (LB) 32000

Figure C-2. M747 Semitrailer.

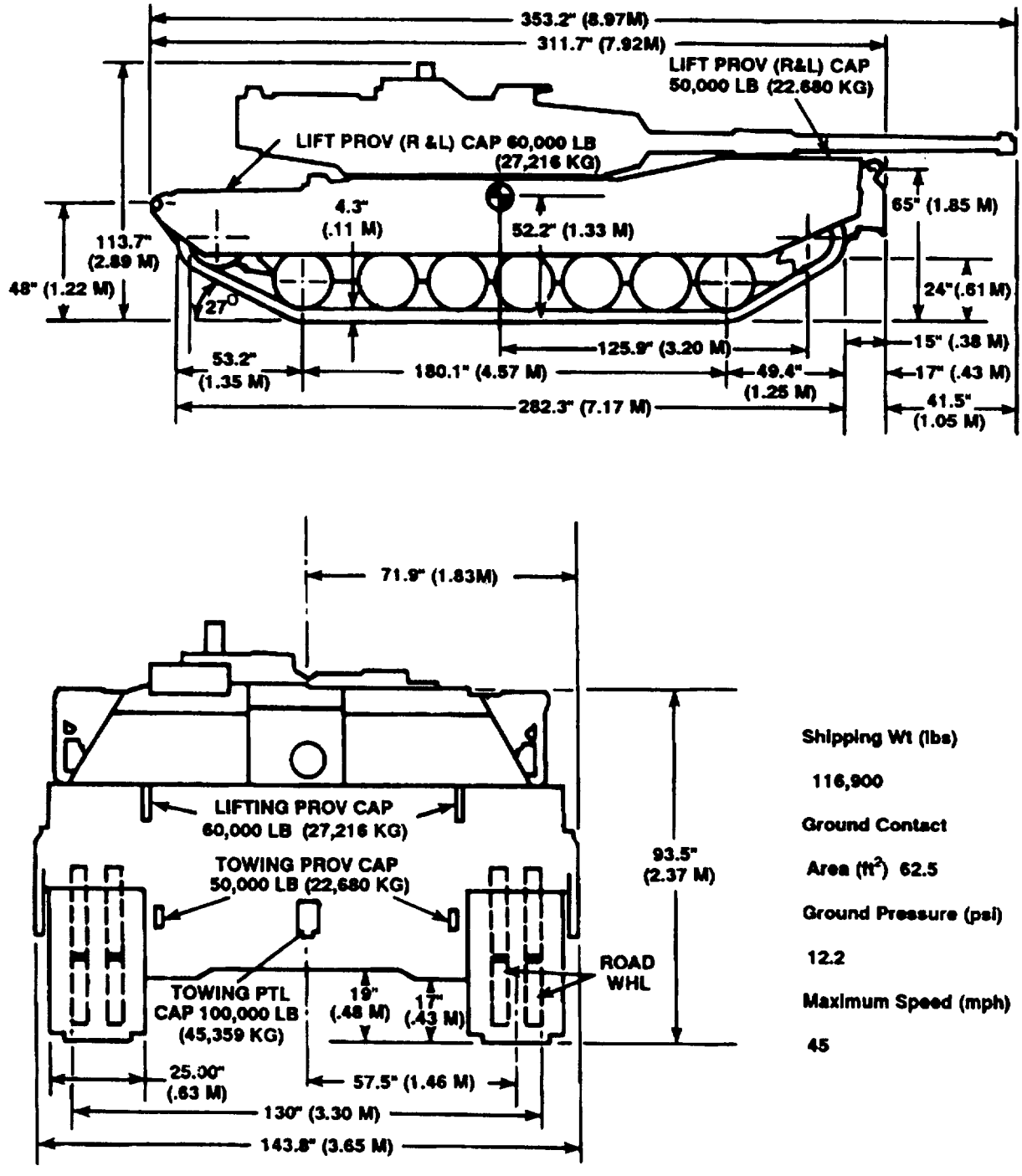


Figure C-3. M1 Tank, Combat.

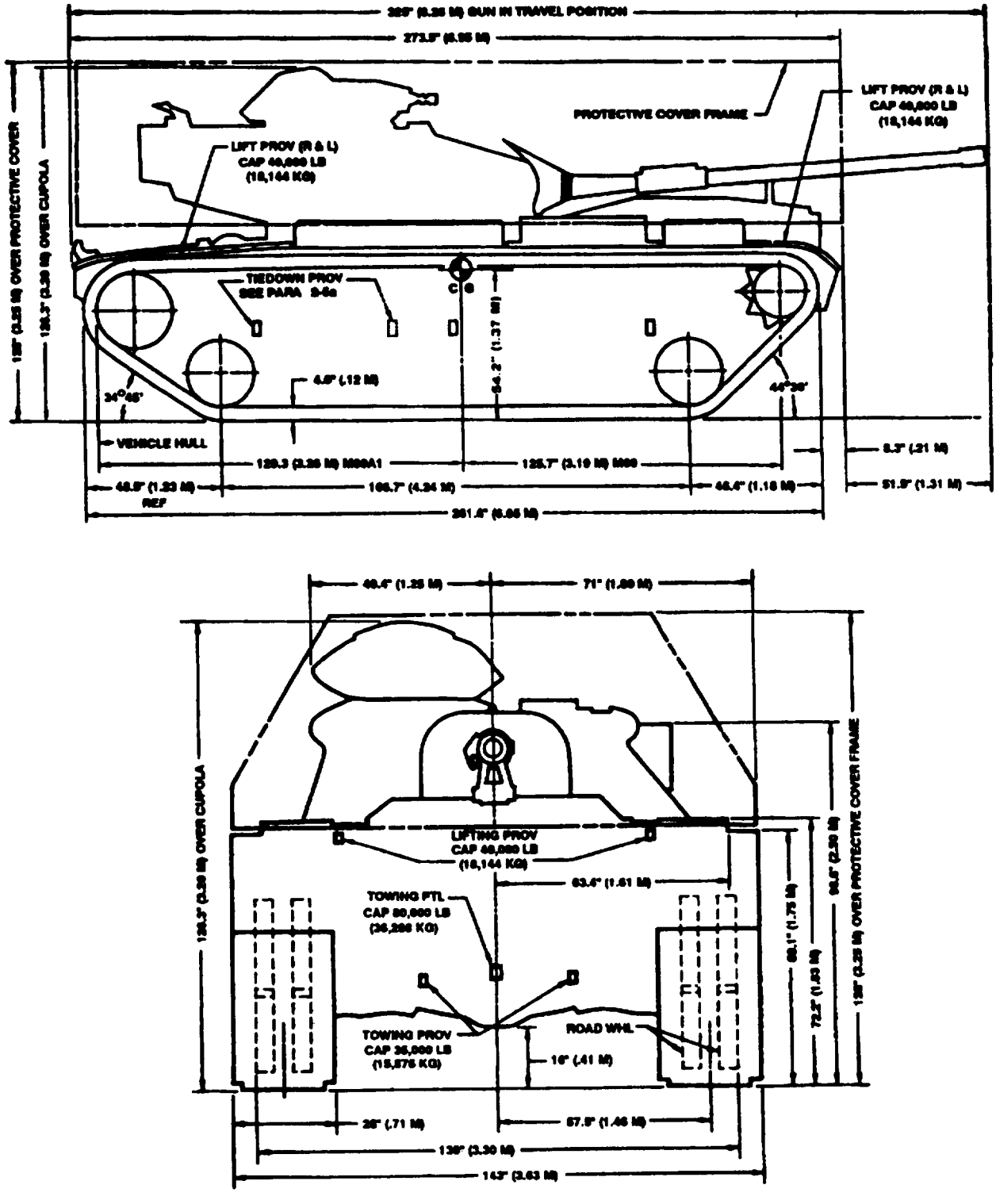
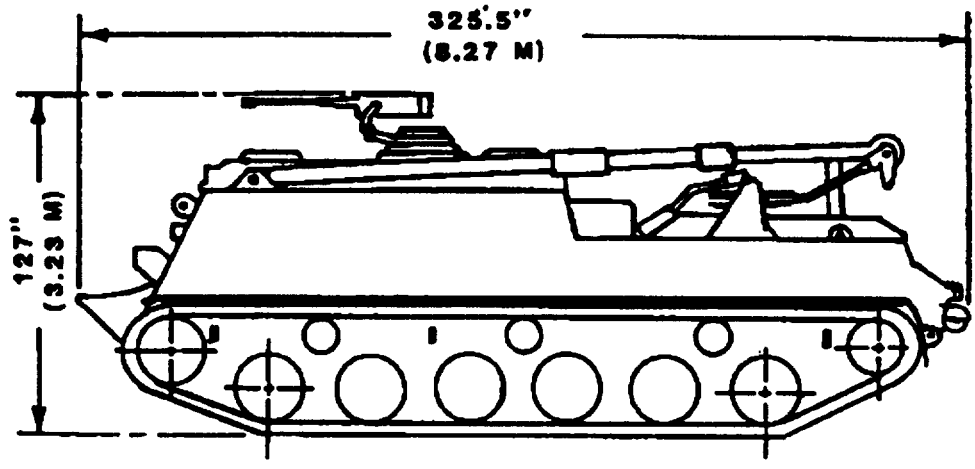
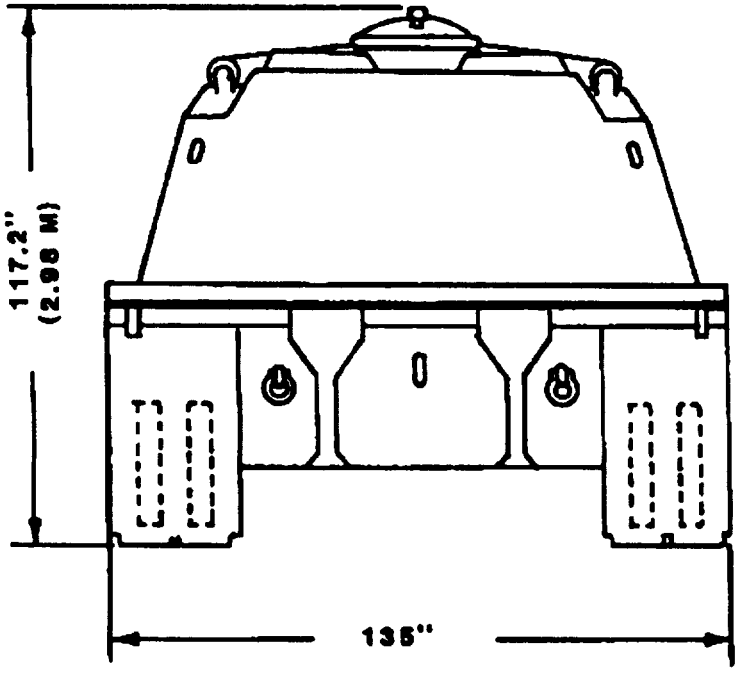


Figure C-4. M60A2 Tank, Combat.





SHIPPING WT. (LB) 108,000
GROUND CONTACT AREA (FT^2) 71.4
GROUND PRESSURE (PSI) 10.5
MAXIMUM SPEED (MPH) 30

Figure C-5. M88 Recovery Vehicle, Medium.

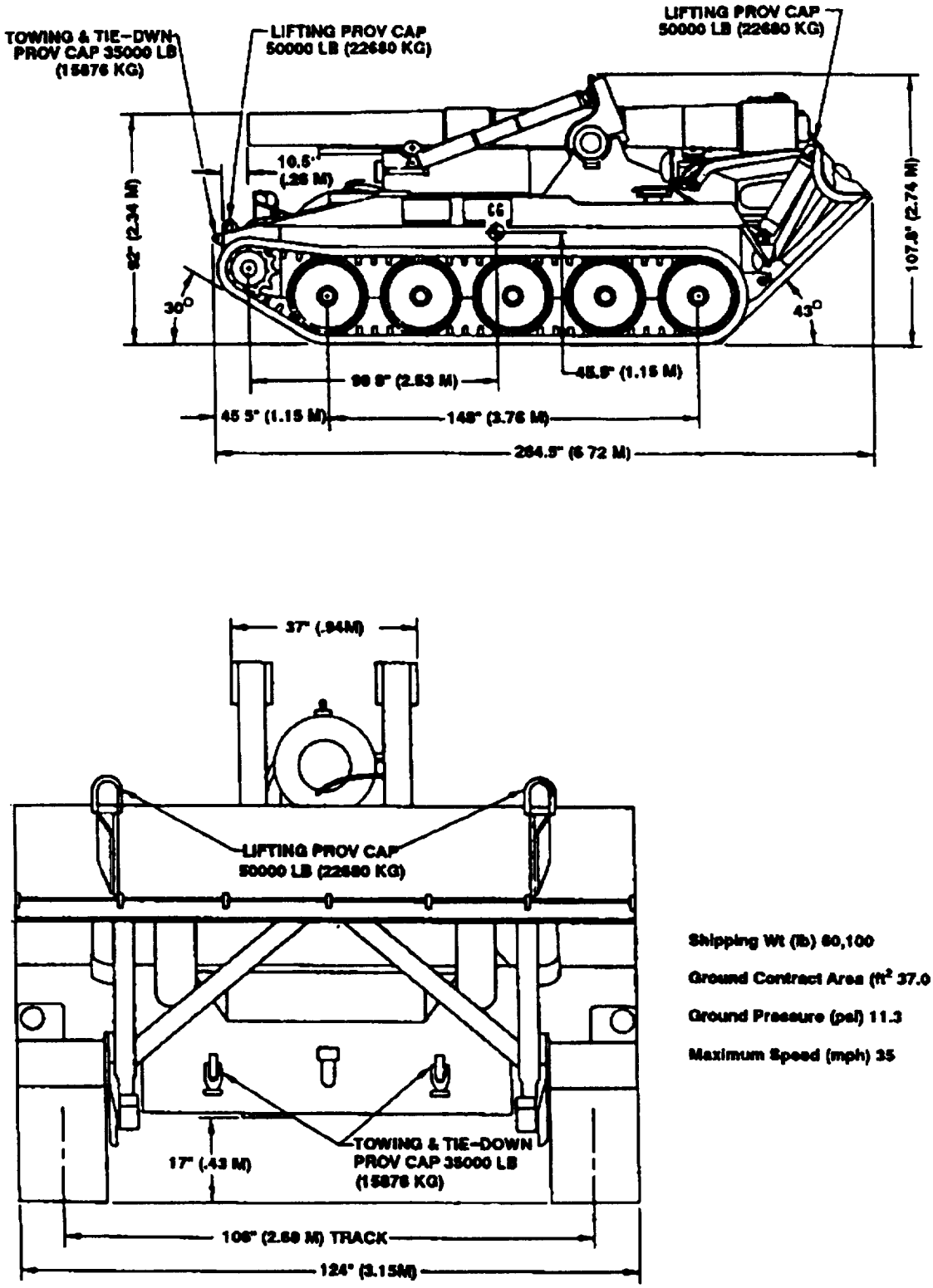
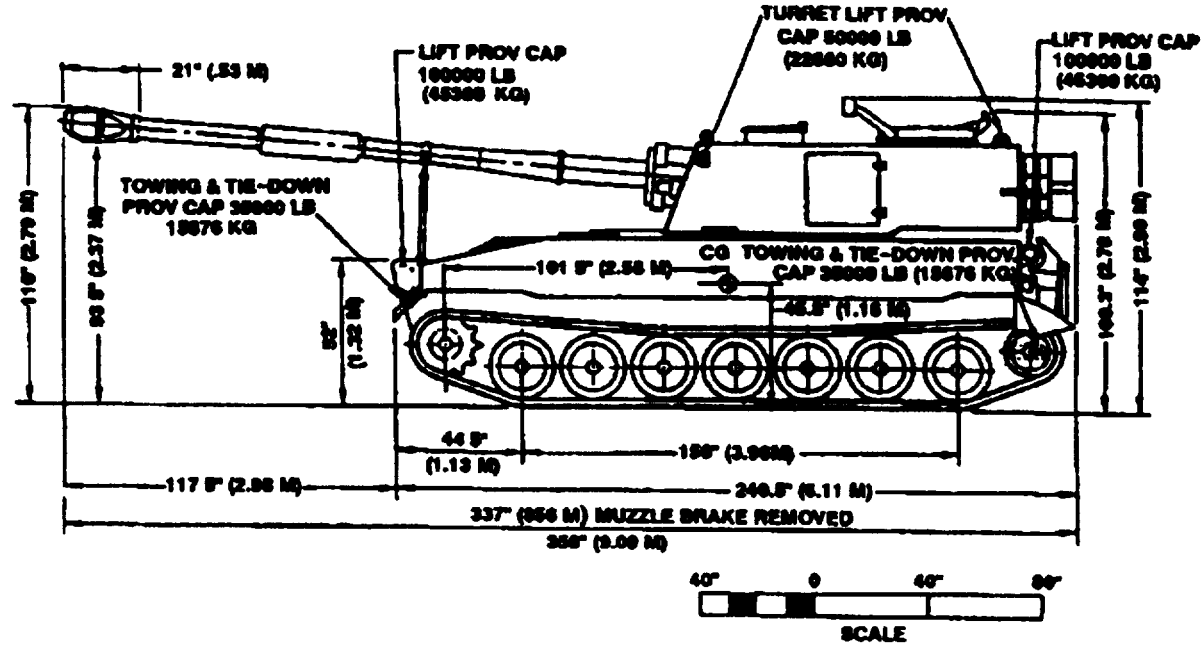


Figure C-6. M110A1 Self-Propelled Howitzer.



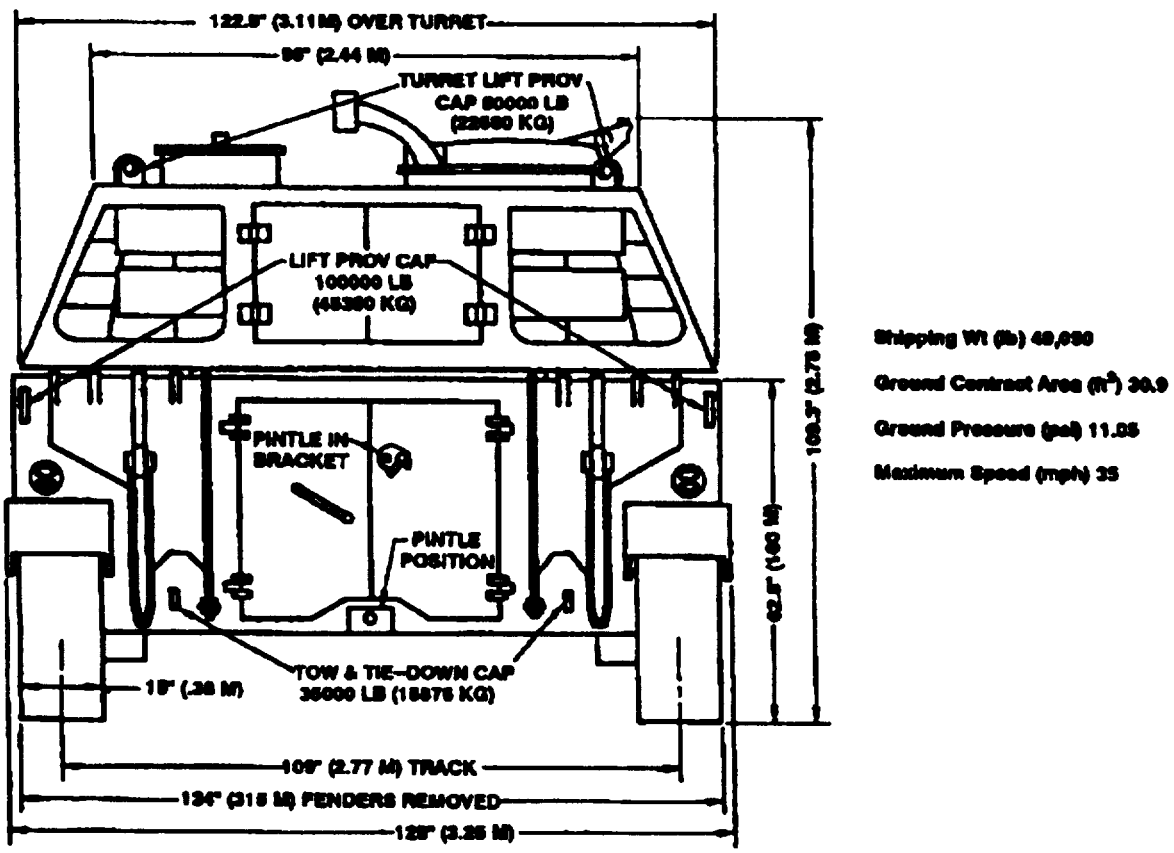
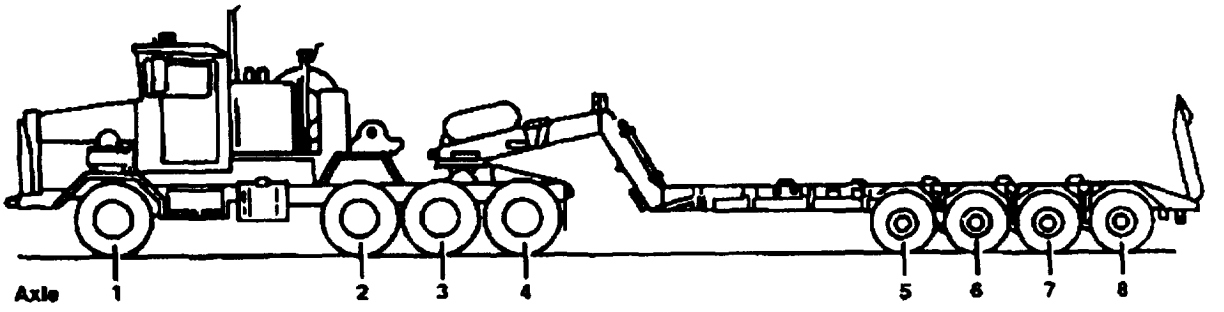


Figure C-7. M109A1 Howitzer.



			Axle Loads										
Payload Item.	Item Weight (lbs)	Gross Vehicle Weight (lbs)	1	2	3	4	5	6	7	8	Overall Width (in.)	Overall Height (in.)	Kingpin Load
Empty	-	71,040	15000	11545	7545	7385	14385	14370	-	-	137	140	3215
M1	116,900	187,950	15250	15650	28100	25900	29750	27850	22400	25050	144	148	43850
M88A1	107,850	179,000	15350	15450	24950	24700	25950	23050	23000	24550	137	157	41350
M110A1	60,100	131,150	15700	13400	17100	16750	17500	17250	16850	16600	137	152	23900
M109A1	49,050	120,100	15600	12750	15750	15500	15350	15400	15000	14750	137	154	20550
M60A3	106,000	177,000	15550	13680	23600	23600	30450	31150	20710	20040	143	174	40480

Combination Length: 783.2"

Figure C-8. Axle Loads of the M911/M747 Combination With Payload Item.

APPENDIX D

AMERICAN TRUCKING ASSOCIATIONS SUMMARY OF SIZE AND WEIGHT LIMITS

Prepared by the American Trucking Association. Inc.

July 1989

SUMMARY OF SIZE & WEIGHT LIMITS

 July 1989

STATE	HEIGHT	WIDTH	LENGTH (FT-IN)						WEIGHT (LBS)						STATE
				Tractor-Semitrailer Combinations			Twin Combinations		Axle Limits (lbs)				Gross Weight Law	Maximum Allowable Gross Weight in Pounds		
	In Feet / Inches	In Inches	Truck (Single Unit)	Semitrailer on Interstate & National Network[4]	Semitrailer Length off National Network[4]	Overall Combination Length on Other Roads	Semitrailer or Trailer on Interstate & National Network	Twin Combination Length on Other Roads	Single	Tandem	Triple	Tire Width (lbs./inch)	Type of Restriction	Interstate	Other Roads	
Alabama	13-6	102[3]	40-0	53-6	53	NR	28-6	NR	20,000[35]	34,000	42,000	NS	Formula B	80,000	88,000	Alabama
Alaska	14-0	–[3]	40-0	48	45	70	90[12]	75	20,000	38,000	42,000	550	Formula B	–	109,000	Alaska
Arizona	13-6[2]	102[3]	40-0	57-6	51/NR[10]	65[10]	28-6	65	20,000[35]	34,000	42,000	NS	Formula B, Table A[31]	80,000	80,000	Arizona
Arkansas	13-6	102	40-0	53-6	48	NR	28	NR	20,000[35]	34,000	54,000	NS	Spec. Limits, Form. B[29]	80,000	80,000	Arkansas
California	14-0	102	40-0	48/53[7]	NR[7]	65[7]	28-6	75[16]	20,000[35]	34,000	34,000	NS	Table B	80,000	80,000	California
Colorado	13-6[2]	102	40-0	57-4	57-4	70[18]	28-6[10]	70[18]	20,000	36,000[22]	54,000	NS	Formula B, Table A[31]	80,000	85,000	Colorado
Connecticut	13-6	102	60-0	48	48	NR	28	NP	22,400	36,000	53,800	600	Formula B w/specific limits	80,000	80,000	Connecticut
Delaware	13-6	102[3]	40-0	53	NR	60	29	NP	20,000	34,000	42,000	NS	Formula B, Spec. Lim.[28]	80,000	80,000	Delaware
Dist. of Columbia	13-6	102[3]	40-0	48	48	55	28	NP	20,000[22]	34,000[22]	42,000	NS	Table A	80,000	80,000	Dist. of Columbia
Florida	13-6	102[3]	40-0[5]	48/57-6[4]	48	NR	28	NP	22,000	44,000	66,000	605	Form. B, Table A & Form. B.[30]	80,000	80,000	Florida
Georgia	13-6	102[3]	60-0	53[7]	48	60	28	NP	20,340	34,000[35]	42,500	NS	Formula B	80,000	80,000	Georgia
Hawaii	13-6	108	40-0	48	45	60	65[13]	65	22,500	34,000	42,000	NS	Formula B, Spec. Lim.[28]	80,000	88,000	Hawaii
Idaho	14-0	102	40-0	48	48[7]	NR[7]	61[12]	61[12]	20,000[35]	34,000	42,000	600[26]	Table B	80,000	105,500	Idaho
Illinois	13-6	102[3]	42-0	53[7]	53[7]	55[7,11]	28-6	65[11]	20,000	34,000	42,000	NS	Table B, Table A[31]	80,000	73,280	Illinois
Indiana	13-6	102	36-0	53[7]	53[7]	NR[7]	28-6	NR	20,000	34,000	34,000	800	Formula B	80,000	80,000	Indiana
Iowa	13-6	102[3]	40-0	53	NR	60[7]	28-6	60	20,000	34,000	42,000	NS	Formula B	80,000	80,000	Iowa
Kansas	14-0	102	42-6	59-6	59-6	NR	28-6	NR[18]	20,000	34,000	42,000	NS	Formula B	80,000	85,500	Kansas
Kentucky	13-6	102[3]	45-0	53	NR	57-9	28	NP	20,000[35]	34,000	50,000	600	Formula B	80,000	80,000	Kentucky
Louisiana	13-6	102[3]	40-0	59-6	50	65	30	NR[16]	20,000[22]	34,000[22]	42,000	650	Spec. Limits, Form. B	80,000	80,000	Louisiana
Maine	13-6[1]	102	45-0	48	48[7]	65[7]	28-6	P	20,000[22,36]	34,000[22]	42,000[22]	600	Formula B[28]	80,000	80,000	Maine
Maryland	13-6	102[3]	40-0	48	48	NR	28	NP	20,000[24,36]	34,000[25]	42,000	—	Formula B	80,000	80,000	Maryland
Massachusetts	13-6	102	35-0	48	45/48[8]	60	28	NP	22,400	36,000	54,000	800	Formula B	80,000	80,000	Massachusetts
Michigan	13-6	102	40-0	53[7]	53[7]	65	28-6	59/65[18]	59[21]	20,000[35]	34,000	39,000	700	Formula B	80,000[34]	80,000[34]	Michigan
Minnesota	13-6	102	40-0	53[7]	48/53[7]	65	28-6	NP	65	20,000	34,000	42,000[23]	600	Formula B, Table A[31]	80,000	73,280	Minnesota
Mississippi	13-6	102	40-0	53	53	NR	30	30	NR	20,000	34,000	34,000	550	Formula B	80,000	80,000	Mississippi
Missouri	13-6[2]	102	40-0	53	NR	60	28	65[15]	65[15]	20,000	34,000	34,000	NS	Formula B, Table A[31]	80,000	73,280	Missouri
Montana	14-0	102	40-0	53	53	75[18]	28-6	NR	75	20,000	34,000	42,000	600[27]	Formula B	80,000	80,000	Montana
Nebraska	14-6	102	40-0	53	53	NR	65[13]	65[13]	65	20,000	34,000	42,000[24]	NS	Table B	80,000	95,000	Nebraska
Nevada	14-0	102	40-0	53/NR[18]	48/NR[18]	70[18]	28-6/NR[18]	70	70	20,000[35]	34,000	42,000	NS	Formula B	80,000	109,000	Nevada
New Hampshire	13-6	102	40-0	48	48	NR	28	NR	60	20,000[22]	34,000[35]	34,000[35]	600	Formula B	80,000	80,000	New Hampshire
New Jersey	13-6	102[4]	35-0	48	48	NR	28	NP	62	22,400	34,000[22]	42,500[22]	800	Formula B	80,000	80,000	New Jersey
New Mexico	14-0	102	40-0	57-6	57-6	65[18]	28-6	65	65	21,600[36]	34,320	34,320	600	Table A	86,400	86,400	New Mexico
New York	13-6	96[3]	35-0	48	45[6]	60[6]	28-6	NP	60	22,400	34,000[22,32]	42,500[25]	800	Table A, Formula B[32]	80,000	80,000	New York
North Carolina	13-6	102[3]	40-0[5]	48	NR[17]	60[17]	28	NP	60	20,000	38,000	57,000	NS	Formula B	80,000	80,000	North Carolina
North Dakota	13-6	102	50-0	53[9]	NR[9]	75[9]	NR[9]	75	75	20,000	34,000	42,000	550	Formula B	80,000	105,500	North Dakota
Ohio	13-6	102	40-0	53	53	NR	28-6	NR	65	20,000	34,000	48,000	650	Table A	80,000	80,000	Ohio
Oklahoma	13-6	102[3]	45-0	59-6	59-6	NR	29	NR[16]	70	20,000	34,000	42,000	NS	Table B	80,000	90,000	Oklahoma
Oregon	14-0	102	40-0	53/NR[10]	NR	60[17]	68[12]	60[12]	75	20,000	34,000	42,000	600	Table B	80,000	80,000	Oregon
Pennsylvania	13-6	102	40-0	53	NR	60	28-6	NP	60	20,000	34,000	42,500	600	Formula B[29]	80,000	80,000	Pennsylvania
Rhode Island	13-6	102	40-0	48-6	48-6	NR	28-6	NP	NS	22,400	44,000	NS	NS	Specific Limits	80,000	80,000	Rhode Island
South Carolina	13-6[2]	102[3]	40-0[5]	53[7]	48	NR[18]	28-6	NR[18]	NR[20]	20,000[22]	34,000[22]	42,000[26]	600[26]	Specific Limits, Table B[33]	80,000	80,600	South Carolina
South Dakota	14-0	102	45-0	53	53	NR[18]	81-6[14,16]	81-6[14,16]	80	20,000	34,000	42,000	600	Formula B	80,000	129,000	South Dakota
Tennessee	13-6	102[3]	40-0	50[7]	50[7]	NR[21]	28-6	NP	65	20,000	34,000	34,000	NS	Formula B	80,000	80,000	Tennessee
Texas	13-6[2]	102	45-0	59	59	NR	28-6	NR	65	20,000	34,000	42,000	650	Table B	80,000	80,000	Texas
Utah	14-0	102	45-0	48[7]/53[7,*]	48[7]	NR[7]	61[17]	61/NR[12]	65	20,000[35]	34,000	42,000	NS	Table B	80,000	80,000	Utah
Vermont	13-6	102	60-0	48	45/NR[6]	65[6]	28	NP	60	22,400[22]	36,000[22]	42,500[22]	600	Table B	80,000	80,000	Vermont
Virginia	13-6	102[3]	40-0	53[7]	NR[17]	60[17]	28-6	NP	60	20,000	34,000	42,500[23]	650	Table B	80,000	80,000	Virginia
Washington	14-0	102	40-0	48	48	NR	60[19]	60[19]	75	20,000[36]	34,000	42,000	600	Table B	80,000	80,000	Washington
West Virginia	13-6[2]	102[3]	40-0	53[7]	NR	60	28	NP	60[19]	20,000	34,000	42,500[23]	NR	Table B	80,000	80,000	West Virginia
Wisconsin	13-6	102	40-0	53[7]	48	60	28-6	NP	60	20,000	34,000	42,000	NS	Table B	80,000	80,000	Wisconsin
Wyoming	14-0	102	60-0	60	60	NR	80[12]	80[12]	85	20,000[36]	36,000	42,500	600[27]	Formula B, Spec. Lim.[28]	80,000	117,000	Wyoming

The Surface Transportation Assistance Act of 1982 (P.L. 97-424) required all states to adopt the following standards governing vehicle width, length, and weight. All states have adopted these minimum requirements.

WIDTH: Limitation of 102" (exclusive of safety devices) on the Interstate and National Network qualifying highways with lanes of 12' or more in width.

LENGTH: Not less than a 48' semitrailer in a tractor-semitrailer combination or a 28' semitrailer in a tractor-semitrailer-trailer (twin or doubles) combination on the Interstate and those classes of qualifying Federal-aid primary system highways designated by the Secretary of Transportation. No overall length on either combination is allowed to be set by the state on the qualifying highways. [Autotransporters: 65', except 75' stinger-steered, 3' front and 4' rear overhang. For state-by-state adoptions, contact National Automobile Transporters Association in Detroit, MI, 313-965-8533.]

WEIGHT: Limits of 20,000 lbs. single axle, 34,000 lbs. tandem axle and maximum gross weight of 80,000 lbs., including enforcement tolerances, on the National System of Interstate and Defense Highways. Overall maximum gross weight and axle groupings must conform to weight limitations provided by federal bridge formula (see other side for formula and chart). Reasonable access (as defined by the state currently) must be allowed to and from the Interstate to terminals and facilities for food, fuel, repairs, and rest.

NJ – 102" on all roads with 11' lane widths, divided highways; OK – 96" on all roads with less than 20' surface width

FOOTNOTES – Length

[1] Two axle truck 35'
[2] NY – allows 45' trailer/60' overall length on other highways, 48' trailer/55' overall length on other roads; VT– longer than 45' trailer, then 60' overall and special permission necessary
[3] Internal measurement generally from kingpin to center of rear axle also governs length limit: CA – 40' (or 38' on single axle trailer; over 48' trailer on National Network, but 48' and over on state routes); GA – 41' (67'6" overall length limit, 22" rear underride protection on state designated highways); ID – 39'; IL – 40' (over 48' trailer); IN – 40'6"/42'6"/43' (over 48' trailer manufactured after 12/31/84 / over 48' trailer, mfg. before 1/1/85 / Interstate and National Network, with 10 mile access); IA – 40'; ME – 38' (measured on trailers over 45' from rear tractor axle to rear semitrailer axle); MI – 40'6" (designated highways); MN – 41' (over 48' trailer, overall length also cannot exceed 65'); SC – 41' (designated highways); TN – 50' (measured from kingpin to rear of trailer); UT – 40'6"; VA – 37' (measured from last tractor axle to first semitrailer axle); WV – same as VA, above; WI – 41' (measure applies to 53' trailers)
[4] MA – 48' by terminal access annual permit (fee charged for annual permit)
[5] ND – trailers longer than 53'/88' overall limit, longer than 75' allowed on designated system
[6] Trailer length may exceed limit as long as overall length is not exceeded; permit may be necessary
[7] Measured as wheelbase between steering axle and rearmost axle on certain state highways, otherwise 55' measured from bumper to bumper on other roads for tractor-semitrailer combinations
[8] Measured from front of first trailer to rear of second trailer, including connecting device: ID – 75' overal if trl/connector/trl exceeds 61'; OR – 60' overall trailer limit on group one highway only, 68' overall trailer limit allowed on designated routes only; SD – maximum trailer length 45; UT – no overall length limit if trailing units measure 61' or less; WY – 48' semitrailer, 40' trailer limit
[9] HI – doubles combination allowed of 65' overall length
[10] SD – sum of trailers plus tow bar (tow bar not to exceed 19')
[11] Allowed on specified state highways at 65', but state sets 55' limit on certain other highways
[12] Semitrailer and/or trailer limits apply; CA – 28'6"; KS – 28'6"; OK – 29'; SD – 45' semitrailer, 28'6" trailer; WY – 48' semitrailer, 40' trailer allowed
[13] OR – 80' includes unlimited trailer length, but permitted on group one highways only; NC and VA – unlimited trailer length/60' overall, state routes only
[14] Overall length limit does not apply when trailer length limit is not exceeded
[15] State may further restrict limits on certain roads
[16] Single unit limits govern
[17] MI – 65' on designated highways; TN – 65' with semitrailer over 48'

FOOTNOTES – Weight

[18] Higher limits allowed off Interstate (including tolerance where applicable); SC – 35,200 lbs. if GVW 75,185 lbs. or less, 39,600 lbs. on state routes, 55,200 lbs. triaxle on state routes
[19] Requires 9' or more of spacing
[20] Requires 8' or more of spacing
[21] Requires 8'6" or more of spacing
[22] Vehicles manufactured before 7/1/87 may carry 800 lbs.
[23] Excludes steer axle from limit; WY - 750 lbs. steer axle limit
[24] Specific limits apply off Interstate
[25] Formula B applies over 73,280 lbs. gross weight
[26] Formula B applies over 73,271 lbs. gross weight
[27] Table A applies off Interstate, primary highways and certain other defined routes - check with state
[28] Formula B applies over 71,000 lbs. gross weight; under 71,000 Table A
[29] Table B applies over 75,185 lbs. gross weight on Interstate
[30] Maximum allowable axle weight limited to 13,000 lbs. with one 32,000 lb. tandem axle, and an 18,000 lb. steering axle, 11 axles up to 164,000 lbs. with proper spacings
[31] Higher weight limits apply for vehicles under 73,280 lbs. GVW (73,000 lbs. in MD)
[32] Steer axle limit of 12,000 lbs., except: AZ – 12,000 - 20,000; CA – 12,500; ID – 14,000; NV – 12,500; NM – 10,000-12,000; WY – 12,000 - 14,000

GENERAL FOOTNOTES

NR – Not Restricted
NP – Not Permitted
NS – Not Specified
* – Longer trailers may be allowed in some states under permit situations or through federal STAA preemption
P – Operated by permit only

FOOTNOTES – Height

[1] ME – 14' load height
[2] AZ – 14' on designated highways; CO – 14'6" on certain highways; IA – 14' divisible loads, permit needed; MO – 14' on Interstates and designated routes; SC – 14' autocarriers; TX – 14' autocarriers; VA – 14' on Interstates and designated routes; WV – height may vary depending on route traveled

FOOTNOTES – Width

[3] 96" on other roads and roads with less than 12' lane widths; MD, MO - 102" on all designated routes plus access, otherwise 96"

INTERSTATE NATIONAL NETWORK ALLOWABLE GROSS WEIGHT
(FEDERAL BRIDGE FORMULA)

GROSS WEIGHT LAW

States have adopted the Federal Bridge Formula for travel on the Interstate and other public highways either by formula (Formula B) or by chart (Table B), with the exception of the states found at Table A. Variations may occur due to rounding language adopted or not adopted by the respective state. Table B appears as provided by the Federal Highway Administration.

FORMULA B: W= 500 (LN/N-1 + 12N + 36)

W = maximum weight in pounds carried on any group of two or more axles computed to nearest 500 pounds.
L = distance in feet between the extremes of any group of two or more consecutive axles.
N = number of axles in group under consideration.

TABLE B (In 1,000 lbs.)

Distance in feet between the extremes of any group or 2 or more consecutive axles	Maximum load in 1000 lbs. carried on any group of 2 or more consecutive axles							
	2 axles	3 axles	4 axles	5 axles	6 axles	7 axles	8 axles	9 axles
4	34.0							
5	34.0							
6	34.0							
7	34.0							
8 and less	34.0	34.0						
more than 8	38.0	42.0						
9	39.0	42.5						
10	40.0	43.5						
11		44.0						
12		45.0	50.0					
13		45.5	50.5					
14		46.5	51.5					
15		47.0	52.0					
16		48.0	52.5	58.0				
17		48.5	53.5	58.5				
18		49.5	54.0	59.0				
19		50.0	54.5	60.0				
20		51.0	55.5	60.5	66.0			
21		51.5	56.0	61.0	66.5			
22		52.5	56.5	61.5	67.0			
23		53.0	57.5	62.5	68.0			
24		54.0	58.0	63.0	68.5	74.0		
25		54.5	58.5	63.5	69.0	74.5		
26		55.5	59.5	64.0	69.5	75.0		
27		56.0	60.0	65.0	70.0	75.5		
28		57.0	60.5	65.5	71.0	76.5	*82.0*	
29		57.5	61.5	66.0	71.5	77.0	*82.5*	
30		58.5	62.0**	66.5	72.0	77.5	*83.0*	
31		59.0	62.5**	67.5	72.5	78.0	*83.5*	
32		60.0	63.5**	68.0	73.0	78.5	*84.5*	*90.0*
33			64.0**	68.5	74.0	79.0	*85.0*	*90.5*
34			64.5**	69.0	74.5	80.0	*85.5*	*91.0*
35			65.5**	70.0	75.0	*80.5*	*86.0*	*91.5*
36			66.0*	70.5	75.5	*81.0*	*86.5*	*92.0*
37			66.5*	71.0	76.0	*81.5*	*87.0*	*93.0*
38			67.5*	71.5	77.0	*82.0*	*87.5*	*93.5*
39			68.0	72.5	77.5	*82.5*	*88.5*	*94.0*
40			68.5	73.0	78.0	*83.5*	*89.0*	*94.5*
41			69.5	73.5	78.5	*84.0*	*89.5*	*95.0*
42			70.0	74.0	79.0	*84.5*	*90.0*	*95.5*
43			70.5	75.0	80.0	*85.0*	*90.5*	*96.0*
44			71.5	75.5	*80.5*	*85.5*	*91.0*	*96.5*
45			72.0	76.0	*81.0*	*86.0*	*91.5*	*97.5*

Distance in feet between the extremes of any group or 2 or more consecutive axles	Maximum load in 1000 lbs. carried on any group of 2 or more consecutive axles							
	2 axles	3 axles	4 axles	5 axles	6 axles	7 axles	8 axles	9 axles
46			72.5	76.5	*81.5*	*87.0*	*92.5*	*98.0*
47			73.5	77.5	*82.0*	*87.5*	*93.0*	*98.5*
48			74.0	78.0	*83.0*	*88.0*	*93.5*	*99.0*
49			74.5	78.5	*83.5*	*88.5*	*94.0*	*99.5*
50			75.5	79.0	*84.0*	*89.0*	*94.5*	*100.0*
51			76.0	*80.0*	*84.5*	*89.5*	*95.0*	*100.5*
52			76.5	*80.5*	*85.0*	*90.5*	*95.5*	*101.0*
53			77.5	*81.0*	*86.0*	*91.0*	*96.5*	*102.0*
54			78.0	*81.5*	*86.5*	*91.5*	*97.0*	*102.5*
55			78.5	*82.5*	*87.0*	*92.0*	*97.5*	*103.0*
56			79.5	*83.0*	*87.5*	*92.5*	*98.0*	*103.5*
57			80.0	*83.5*	*88.0*	*93.0*	*98.5*	*104.0*
58				*84.0*	*89.0*	*94.0*	*99.0*	*104.5*
59				*85.0*	*89.5*	*94.5*	*99.5*	*105.0*
60				*85.5*	*90.0*	*95.0*	*100.5*	*106.5*
61				*86.0*	*90.5*	*95.5*	*101.0*	*106.5*
62				*86.5*	*91.0*	*96.0*	*101.5*	*107.0*
63				*87.5*	*92.0*	*96.5*	*102.0*	*107.5*
64				*88.0*	*92.5*	*97.5*	*102.5*	*108.0*
65				*88.5*	*93.0*	*98.0*	*103.0*	*108.5*
66				*89.0*	*93.5*	*98.5*	*103.5*	*109.0*
67				*90.0*	*94.0*	*99.0*	*104.5*	
68				*90.5*	*95.0*	*99.5*	*105.0*	
69				*91.0*	*95.5*	*100.0*	*105.5*	
70				*91.5*	*96.0*	*101.0*	*106.0*	
71				*92.5*	*96.5*	*101.5*	*106.5*	
72				*93.0*	*97.0*	*102.0*	*107.0*	
73				*93.5*	*98.0*	*102.5*	*107.5*	
74				*94.0*	*98.5*	*103.0*	*108.5*	
75				*95.0*	*99.0*	*103.5*	*109.0*	
76				*95.5*	*99.5*	*104.5*		
77				*96.0*	*100.0*	*105.0*		
78				*96.5*	*101.0*	*105.5*		
79				*97.5*	*101.5*	*106.0*		
80				*98.0*	*102.0*	*106.5*		
81				*98.5*	*102.5*	*107.0*		
82				*99.0*	*103.0*	*108.0*		
83				*100.0*	*104.0*	*108.5*		
84					*104.5*	*109.0*		
85					*105.0*			
86					*105.5*			
87					*106.0*			
88					*107.0*			
89					*107.5*			
90					*108.0*			
91					*108.5*			
92					*109.0*			

* 68,000 may be carried on tandem axles spaced at least 36' apart.
NOTE: States that have a "table" in their law [*See Type of Restriction on other side*] may have slight weight differences for selected axles/distances due to rounding.
NOTE: All states applying Table B or Formula B restrict Interstate highways to 80,000 lbs.
NOTE: The higher B' tandem weight is not a requirement of Formula B, but rather is an interpretation by the federal government, and has not necessarily been adopted by individual states.
** Dump trailer, tank trailer, ocean transport container combinations – 68,000 lbs. until 9/1/89, apply outer bridge limits

TABLE A ALLOWABLE LOADS
(In 1,000 lbs.)

Distance	Arizona	Colorado	Florida	Illinois			Minnesota					Missouri	New Mexico	New York	Ohio	Washington			Wyoming	D.C.
				3 Axles	4 Axles	5 Axles	3 Axles	4 Axles	5 Axles	6 Axles	7 Axles					3 Axles	4 Axles	5 Axles		
4	34.0	44.0	44.0									32.0	34.3	38.0						
5	34.0	45.0	44.0									32.0	35.1	39.0						
6	34.0	46.0	44.0									32.0	35.9	40.0						
7	34.0	47.0	44.0				41.5					32.0	36.7	41.0						
8	42.0	48.0	44.0				42.0					33.2	37.4	42.0	48.0	42.0				37.0
9	42.5	49.0	48.5				43.0					34.4	38.2	43.0	48.0	42.5				38.1
10	43.5	50.0	49.4	41.0			43.5	49.0				35.6	39.0	44.0	48.0	43.5			43.5	39.1
11	44.0	51.0	50.3	42.0			44.5	49.5				36.8	39.8	45.0	48.0	44.0			45.0	40.2
12	50.0	52.0	51.3	43.0			45.0	50.0				38.0	40.6	46.0	48.8	45.0	50.0		48.0	41.3
13	50.5	53.0	52.2	44.0			46.0	51.0				39.2	41.3	47.0	49.7	45.5	50.5		50.0	42.3
14	51.5	54.0	53.1	44.5			46.5	51.5	57.0			40.4	42.1	48.0	50.6	46.5	51.5		52.0	43.4
15	52.0	55.0	54.0	45.0	50.0		47.5	52.0	57.5			41.6	42.9	49.0	51.5	47.0	52.0		54.0	44.5
16	52.5	56.0	54.9	46.0	50.5		48.0	53.0	58.0			42.8	43.7	50.0	52.4	48.0	52.5	52.5	54.0	45.6
17	53.5	57.0	55.8	47.0	51.5		49.0	53.5	59.0			44.0	44.5	51.0	53.3	48.5	53.5	53.5	54.0	46.7
18	54.0	58.0	56.8	47.5	52.0		49.5	54.0	59.5			45.2	45.2	52.0	54.2	49.5	54.0	54.0	56.0	47.8
19	54.5	59.0	57.7	48.0	52.5		50.5	55.0	60.0			46.4	53.1	53.0	55.1	50.0	54.5	54.5	58.0	48.8
20	55.5	60.0	58.6	49.0	53.5		51.0	55.5	60.5	66.0	72.0	47.6	54.0	54.0	56.0	51.0	55.5	55.5	62.0	49.9
21	55.0	61.0	59.5	50.0	54.0		52.0	56.0	61.5	67.0	72.5	48.8	54.9	55.5	56.9	51.5	56.0	56.0	64.0	51.0
22	56.5	62.0	60.4		54.5		52.5	57.0	62.0	67.5	73.0	50.0	55.8	56.0	57.8	52.5	56.5	56.5	65.0	52.1
23	57.5	63.0	61.3		55.5		53.5	57.5	62.5	68.0	73.5	51.0	56.7	57.0	58.7	53.0	57.5	57.5	66.0	53.1
24	58.0	64.0	62.3		56.0		54.0	58.0	63.0	68.5	74.0	52.0	57.6	58.0	59.6	54.0	58.0	58.0	66.0	54.2
25	58.5	65.0	63.2		56.5			59.0	64.0	69.0	75.0	53.0	58.5	59.0	60.5	54.5	58.5	58.5	66.0	55.3
26	59.5	66.0	64.1		57.5			59.5	64.5	70.0	75.5	54.0	59.4	60.0	61.4	55.0	59.5	59.5	66.0	56.4
27	60.0	67.0	65.0		58.0			60.0	65.0	70.5	76.0	55.0	60.3	61.0	62.3	56.0	60.0	60.0	66.0	57.4
28	60.5	68.0	65.9		58.5			61.0	65.5	71.0	76.5	56.0	61.2	62.0	63.2	57.0	60.5	61.0	66.0	58.5
29	61.5	69.0	66.8		59.5			61.5	66.5	71.5	77.0	57.0	62.1	63.0	64.1	57.5	61.5	62.0	66.0	59.6
30	62.0	70.0	67.8		60.0			62.0	67.0	72.0	77.5	58.0	63.0	64.0	65.0	58.5	62.0	63.0	67.0	60.7
31	62.5	71.0	68.7		60.5			63.0	67.5	73.0	78.5	59.0	63.9	65.0	65.9	59.0	62.5	64.0	68.0	61.7
32	63.5	72.0	69.6		61.5			63.5	68.0	73.5	79.0	60.0	64.8	66.0	66.8	60.0	63.5	65.0	69.0	62.8
33	64.0	73.0	70.5		62.0			64.0	69.0	74.0	79.5	61.1	65.7	67.0	67.7		64.0	66.0	70.0	63.9
34	64.5	74.0	71.4		62.5			65.0	69.5	74.5	80.0	62.2	66.6	68.0	68.6		64.5	67.0	71.0	65.0
35	65.5	75.0	72.3		63.5			65.5	70.0	75.0		63.5	67.5	69.0	69.5		65.5	68.0	72.0	66.2
36	66.0	76.0	73.2		64.0			66.0	70.5	76.0		64.6	68.4	70.0	70.4		66.0	69.5	73.0	67.2
37	66.5	77.0						67.0	71.5	76.5		65.9	69.3	71.0	71.3		66.5	70.5	74.0	68.1
38	67.5	78.0						67.5	72.0	77.0		67.1	70.2		72.2		67.5	72.0	75.0	68.9
39	69.0	79.0						68.0	72.5	77.5		68.3	71.1		73.1		68.0	72.5	76.0	69.7
40	70.5	80.0						69.0	73.0	78.0		69.7	72.0		74.0		68.5	73.0	76.0	70.6
41	72.5	81.0						69.5	74.9	79.0		70.8	72.9		74.9		69.5	73.5	76.0	71.4
42	74.0	82.0				72.0		70.0	74.5	79.5		72.0	73.8		75.8		70.0	74.0	76.0	72.3
43	75.0	83.0				73.0		71.0	75.0	80.0		73.3	74.7		76.7		70.5	75.0	76.0	
44	75.5	84.0				73.3		71.5	75.5				75.8		77.6		71.5	75.5	76.0	
45	76.0	85.0						72.0	76.0				76.5		78.5		72.0	76.0	77.0	
46	76.5								77.0				77.4		79.4		72.5	76.5	77.4	
47	77.5								77.5				78.3		80.0		73.5	77.0	78.3	
48	78.0								78.0				79.2				74.0	78.0	79.9	
49	78.5								79.0				80.1				74.5	78.5		
50	79.0								79.5				81.0				75.5	79.0		
51	80.0								80.0				81.9				76.0	80.0		
52													82.8				76.5	80.5		
53													83.7				77.5	81.0		
54													84.6				78.0	81.5		
55													85.5				78.5	82.5		
56													86.4				79.5	83.0		
57																	80.0	83.5		
58																		84.0		
59																		85.0		
60																		85.5		
61																		86.0		

APPENDIX E

CONVOY COMMANDER'S CHECKLIST

PART I. CONVOY PLANNING CHECKLIST

Actions	References
IDENTIFY VEHICLES	FM 55-312
Has the convoy clearance number been placed on the appropriate vehicles?	
What are the number and type of vehicles needed to accomplish the mission?	
What are the type and number of vehicles needed to control and support the convoy?	
What are the type and number of trailers needed for the movement?	
Are there any oversize/overweight vehicles?	
Are there any nonmilitary vehicles in the convoy?	
IDENTIFY PERSONNEL	FM 55-312
Who are the personnel that will be going with the convoy?	
What is the rank and gender of the identified personnel?	
Who will serve as the command structure?	
Who are the qualified drivers and assistant drivers?	
Who are the personnel that will not be driving the vehicles?	
Who are the personnel that will be road guards?	
ORGANIZE CONVOY	FM 55-312
How many march units will be in the convoy?	
Which vehicles are in each march unit?	
What is the interval between march units?	
Who is assigned to each vehicle?	
Has the pacesetter for each march unit been identified?	
DETERMINE ETA AT DESTINATION	None
DETERMING METHOD OF VEHICLE SUPPORT TO BE USED WHILE EN ROUTE	FM 55-312 CONUSA Convoy Support Directories
How much POL will the vehicle require?	
How often will they need to refuel?	Vehicle TMs

Actions	References
How will POL be obtained while en route?	
How will maintenance support be obtained?	
DETERMING HOW THE PERSONNEL WILL BE SUPPORTED WHILE EN ROUTE	FM 55-312 AR 55-29
How many rest halts will be required?	
How many meals will be required?	
How many meals will be provided?	
Will the convoy stop overnight?	
How will medical support be provided?	
DETERMINE HOW INTERNAL CONVOY COMMUNICATIONS WILL BE PROVIDED	FM 55-312 Unit SOI
What communications will be used?	
Where will the communication equipment be placed in the convoy?	
SELECT ROUTE	FM 55-312 CONUSA Convoy Support Directories
Have all the possible routes been identified?	
Have all the routes been reconnoitered?	
Is the route selected suitable for the vehicles, cargo, and operators?	
Does the route selected have the needed support facilities?	
DETERMING ROUTE TO BE USED	FM 55-312
What are the start and release points?	
What are the highway route numbers?	
Have the critical route sections been identified?	
Have the locations and duration of all halts been identified?	
Has the rate of march for each route segment been established?	
ENSURE THAT ADMINISTRATIVE REQUIREMENTS HAVE BEEN MET	FM 55-312 FM 55-30 FM 101-5 FORSCOM Reg 55-1
Has the road movement request been prepared?	
Have the DD Forms 1266 been prepared, if required?	
Have the operations or movement orders been prepared?	
Have the required requests and supporting documents been forwarded?	
Are the appropriate accident documents on hand such as DA Form 285 (US Army Accident Investigation Report) and AR 385-40?	

PART II. CONVOY PREPARATION CHECKLIST

Actions	References
ENSURE THAT VEHICLES ARE READY TO MOVE	FM 55-312 Vehicle TMs FM 55-30
Have PMCs been performed on vehicles to include trailers?	
Have all deficiencies been corrected?	
Have the vehicles been fueled?	
Have all five-gallon fuel cans been filled, if required?	
Are all vehicles properly configured?	
Are the required BII available and serviceable?	
Is the required safety equipment available and serviceable?	
Is all equipment loaded properly?	
Are all the vehicles properly marked?	
Are the vehicles properly assembled?	
Are the vehicles properly dispatched?	
ENSURE THAT PERSONNEL ARE READY TO MOVE	FM 55-312 Convoy OPORD
Has all remedial training, familiarization, or qualification testing been completed?	
Do all personnel have their proper uniforms?	
Do all personnel have their required personal equipment?	
ENSURE THAT THE CONVOY COMMANDER HAS THE FOLLOWING DOCUMENTS TO TAKE WITH HIM DURING THE MOVEMENT	FM 55-312 FORSCOM Reg 55-1
Approved road movement order.	
Graphic strip map.	
Applicable CONUSA Support Directories.	
Highway maps for all states through which the convoy will travel.	
All documents required to obtain logistical support for the convoy (for example, meal tickets).	
copy of convoy OPORD.	
Extra copies of the convoy en route report forms for making en route reports to the SMCC.	
Any other documents required by the unit SOP.	
ENSURE THAT ALL MEMBERS OF THE CONVOY COMMAND STRUCTURE HAVE COPIES OF THE REQUIRED DOCUMENTS	None

Actions	References
ENSURE THAT ALL CONVOY DRIVERS RECEIVE A BRIEFING THAT COVERS THE FOLLOWING ITEMS	FM 55-312 FM 55-30
Convoy route and march table.	FORSCOM Reg
Convoy route and march table.	55-1
Convoy OPORD	
Use of the approval request for convoy clearance and strip map.	
Reporting requirements (internal and external).	
Procedures during halts (PMCs, vehicle security, safety).	
Safety during movement.	
Security of sensitive equipment (address the use of safe havens, if applicable).	
Maintenance procedures.	
Accident and emergency procedures.	
Convoy organization and vehicle assignments.	
Personnel and position of convoy command structure.	
PART III. CONVOY MOVEMENT CHECKLIST	
ENSURE THAT THE MOVEMENT IS BEING EXECUTED PROPERLY	FM 55-312 Convoy OPORD RMO
Are the intervals between the serials and march units being maintained?	
Are the intervals between the vehicles being maintained?	
Is the proper rate of march being maintained?	
Are the arrival and departure times at state lines and intersections being met?	
CONDUCT PLANNED HALTS PROPERLY	FM 55-312 Convoy OPORD RMO
Are arrival and departure times being met?	
Are the required PMCs being performed?	
Do the vehicle operators appear alert?	
Are the loads inspected to ensure that they are still secure?	
CONDUCT UNPLANNED HALTS PROPERLY	FM 55-312 Convoy OPORD RMO
Are mechanical problems being handled in a safe and proper manner?	
Have the proper accident reports been prepared?	
Have accidents been reported to the local law enforcement agencies?	
Are proper accident and emergency procedures being followed when necessary?	

Actions	References
ENSURE THAT THE REQUIRED REPORTS BEING FILED WITH THE SMCC UPON ARRIVAL AT THE CVNS.	FORSCOM Reg 55-1

Convoy commanders may use the work sheet shown to log reports.

ERP LOCATION	ARRIVAL TIME	REPORTED TO SMCC

APPENDIX F

SPECIFICATIONS FOR CONVOY WARNING SIGNS

SCOPE

Specifications for convoy signs that are highly visible to approaching vehicle operators both day and night (AR 55-29).

DESIGN

1. Signs reading CONVOY FOLLOWS and CONVOY COMMANDER will be 8 x 50 inches with a 3/8-inch-wide border inserted 3/8 inch from sign edge.

2. The legend will be 4 inches high.

3. Signs reading CONVOY AHEAD and CONVOY COMMANDER will be 16 x 50 inches with a 3/8-inch-wide border inserted 3/8 inch from the sign edge.

4. The legend will be 5 inches high.

COLOR AND MATERIAL

1. Signs of both sizes shall have the same color combination.

2. Background will be yellow reflex-reflective sheeting meeting federal specification LS-300A-Type 1, Class 2 or 3, reflectivity 1, color j or reflective paint, which will meet General Services Administration (GSA) schedules listed under Class 8010.

3. Legend and sign border shall be black nonreflective material with opaque inks compatible with base material.

CONSTRUCTION

Finished sign may be applied to any of the following by heat-activated or pressure-sensitive adhesive

- Unpainted aluminum .064 gauge.
- Exterior grade plywood (US Commercial Standard CS 44-60). Galvanized steel .064 gauge.

APPENDIX G

SAMPLE OPERATOR'S REPORT ON MOTOR VEHICLE ACCIDENTS (SF 91)

OPERATOR'S REPORT OF MOTOR VEHICLE ACCIDENT

This form is to be completed by the Government operator at the time and the scene of the accident if possible. See the Privacy Act Statement on page 4.

DEPARTMENT OR AGENCY: Department of Army

NAME AND LOCATION OF ORGANIZATION TO WHICH YOU ARE ASSIGNED: 123 Med Truck Co. Fort Eustis, Va.

1. OPERATOR DATA

Print clearly	LAST NAME	FIRST NAME	MIDDLE INITIAL	AGE
	ADAMS,	William	C.	21

RANK, RATING OR TITLE	SERVICE NUMBER OR SOCIAL SECURITY NO.	GOVT. MOTOR VEHICLE OPERATOR PERMIT NO.
SP4	173-02-0966	

HOME ADDRESS (Number, street, city, State, ZIP code): PO Box 271, Grafton Va. 23699

HOME TELEPHONE NO.: (412) 224-0072

2. ACCIDENT TIME AND LOCATION

ACCIDENT OCCURRED — DATE	DAY OF WEEK	TIME	NUMBER OF HOURS ON DUTY PRIOR TO ACCIDENT
9/6/90	FRIDAY	0945 a.m. p.m.	3

PLACE OF ACCIDENT (If in city, give number, street, city and State. If outside city limits, indicate mileage to nearest city, or other landmark.): Mercury Blvd and Elm Street

ORIGIN OF TRIP: Fort Eustis Va

DESTINATION: Fort Monroe Va.

PURPOSE OF TRIP: Supply Trip

3. FEDERAL VEHICLE (Including privately owned Federally operated)

MAKE	TYPE	REGISTRATION NUMBER OR OTHER IDENTIFICATION

PARTS OF VEHICLE DAMAGED (Describe): Right rear fender and tire cut.

OPERATOR'S ESTIMATED AMOUNT OF DAMAGE: $ 150

IF THIS WAS A BACKING ACCIDENT, WAS A GUIDE AVAILABLE? ☐ YES ☒ NO If "Yes," was guide used? ☐ YES ☐ NO

4. OTHER VEHICLE INVOLVED (If more than one, show in item 12, page 3)

MAKE	TYPE	YEAR
Ford	4 door Sedan	1989

OPERATOR'S STATE PERMIT NUMBER	VEHICLE LICENSE NUMBER AND STATE
NY-3372014 7	NY 23372

OPERATED BY — NAME: Johnson, Peter J.

OPERATED BY — HOME ADDRESS (Number, street, city, State, ZIP code): 1414 87th St NYC, NY

OWNED BY — NAME: Johnson, Peter J.

OWNED BY — ADDRESS (Number, street, city, State, ZIP code): 1414 87th St. NYC NY.

PARTS OF VEHICLE DAMAGED (Describe): Right front head light, fender, bumper and grille

OPERATOR'S ESTIMATED AMOUNT OF DAMAGE: $ 1,000

5. OTHER PROPERTY DAMAGED (Explain. If more space is needed, continue in item 12, page 3.)

None.

91-108

STANDARD FORM 91 PAGE 1 (REV. 11-76)
Prescribed by GSA, FPMR 101-39-8

Figure G-1. Sample of SF 91, Page 1.

	NAMES	HOME ADDRESSES
6. PERSONS INJURED	N/A	
7. OCCUPANTS IN YOUR VEHICLE	N/A	
8. OCCUPANTS IN OTHER VEHICLE(S)	Lilley Johnson (Wife)	1414 87th St. NYC, NY
9. WITNESSES AND POLICE		

POLICE OFFICER: J. P. Murphy | BADGE NUMBER: 321 | PRECINCT OR HEADQUARTERS: 4th Precinct

10. ACCIDENT CONDITIONS

INDICATE:	FEDERAL VEHICLE (Includes privately owned Federally operated)	OTHER VEHICLE (2)
DIRECTION OF TRAVEL	East on Mercury Blvd.	North on Elm St.
SIDE OF STREET OR HIGHWAY	Right-hand lane	Right-hand lane
APPROXIMATE SPEED	35 MILES PER HOUR	30 MILES PER HOUR

CONDITION OF ROADWAY (Wet or dry, icy, etc.)	WEATHER (Clear, foggy, rain, snow, etc.)	TYPE OF ROADWAY (concrete, macadam, etc.)
dry	clear	concrete

OTHER INFORMATION (Explain stop signs, traffic signals, obstructions, etc.)

There is a stop light at the intersection of Mercury Blvd. and Elm. The light was green for those traveling on Mercury Blvd. I was the fourth car to go through the light. There was another car behind me.

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Figure G-1. Sample of SF 91, Page 2. (Continued).

11. EVENTS AFTER ACCIDENT

STATE WHO GAVE MEDICAL AID, IF ANY WAS GIVEN: none

WHERE WAS INJURED TAKEN:

CONDITION OF OTHER DRIVER: N/A

If other driver or persons injured made statements as to cause of accident and extent of personal or property damage, relate conversation, also, give names and addresses of others hearing such statements.

My passenger told the police officer that he did not see the red light until the last minute. He slammed on his brakes, but he just could not stop in time.

12. OTHER VEHICLE OR PROPERTY INVOLVED
CONTINUATION—*If more than one vehicle involved*

MAKE | TYPE | YEAR

OPERATOR'S STATE PERMIT NUMBER | VEHICLE LICENSE NUMBER AND STATE

OPERATED BY — NAME

OPERATED BY — HOME ADDRESS (*Number, street, city, State, ZIP code*)

OWNED BY — NAME

OWNED BY — ADDRESS (*Number, street, city, State, ZIP code*)

PARTS OF VEHICLE DAMAGED (*Describe*)

OPERATOR'S ESTIMATED AMOUNT OF DAMAGE: $

OTHER PROPERTY DAMAGED (*Explain*)

13. DIAGRAM WHAT HAPPENED BY USING THESE SYMBOLS, BELOW

1. Number Federal vehicle as 1, other vehicle as 2—additional vehicle as 3, and show direction of travel by arrow (Example: 1 → , ← 2)
2. Use solid line to show path before accident ——→ (1) or (2)
Broken line after accident - - - - - - → (1) or (2)
3. Show pedestrian by ——→ ○
4. Show railroad by ⊣⊢⊣⊢⊣⊢⊣⊢⊣⊢
5. Give names or numbers of streets or highways
6. Indicate north by arrow on this circle ◯

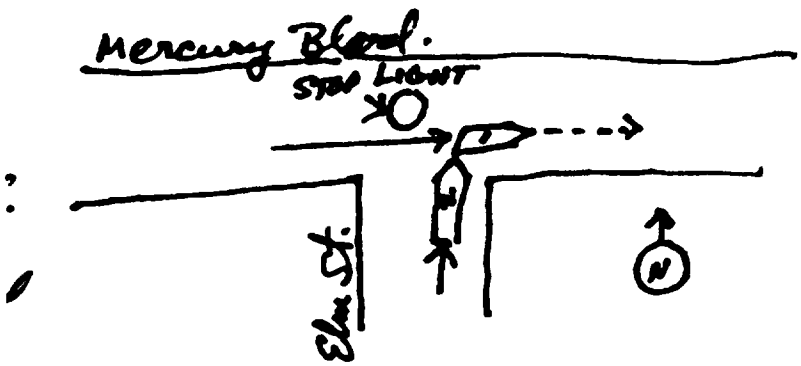

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Figure G-1. Sample of SF 91, Page 3. (Continued).

14. OPERATOR'S STATEMENT OF ACCIDENT AND USE OF SAFETY EQUIPMENT

Tell in your own words how the accident happened. I was driving east on Mercury Blvd. The traffic light was green. There were vehicles in front of me and also behind me. We were traveling between 30 and 35 MPH. The other car that hit me, ran a red light, and hit the back end of my vehicle. I did not see the other vehicle coming.

WAS VEHICLE EQUIPPED WITH SEAT BELTS?	[X] YES	[ ] NO	*If "Yes," were they in use at time of accident?*	[X] YES	[ ] NO

● *Have you answered ALL the questions as completely as possible?*

In compliance with the Privacy Act of 1974, the following information is provided: Solicitation of the information requested on this form is authorized by Title 40 U.S.C. Section 491. Disclosure of the information by a Federal employee is mandatory as it is the first step in the Government's investigation of a motor vehicle accident. The principal purposes for which the information is intended to be used are to provide necessary data for use by legal counsel in legal actions resulting from the accident and to provide accident information/statistics for use in analyzing accident causes and developing methods of reducing accidents. Routine use of the information may be by Federal, State or local governments, or agencies, when relevant to civil, criminal, or regulatory investigations or prosecutions. An employee of a Federal agency who fails to report accurately a motor vehicle accident involving a Federal vehicle or who refuses to cooperate in the investigation of an accident may be subject to administrative sanctions.

OPERATOR SIGN HERE ▶ **DATE SIGNED**

U.S. GPO: 1980-342-942/2430 **STANDARD FORM 91 PAGE 4 (REV. 11-76)**

Figure G-1. Sample of SF 91, Page 4. (Continued).

GLOSSARY

Section I. Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AR	Army regulation
ARNG	Army National Guard
CB	center of balance
CCN	convoy clearance number
CG	center of gravity
CHD	CONUS highway directory
CLO	chief logistics officer
CMO	convoy movement order
CONUS	continental United States
CONUSA	numbered armies in the continental United States
CP	checkpoint
CST	Central Standard Time
CVN	convoy vehicle number
DA	Department of Army
DARMS	Developmental Army Readiness and Mobilization System
DD form	Department of Defense form
DMC	defense movement coordinator
DOD	Department of Defense
DOT	Department of Transportation
ERP	en route reporting points
EST	Eastern Standard Time
ETA	estimated time of arrival
ETD	estimated time of departure
FCJ4	FORSCOM Joint 4
FM	field manual
FORSCOM	United States Army Forces Command
FR	FORSCOM regulation
GPM	gallons per mile

GVW	gross vehicle weight
HRPT	highway regulation point team
HS	home station
ITO	installation transportation officer
JSAC	Joint State Area Command
lb	pound(s)
LSA	Logistical Support Agency
LSC	Logistical Support Center
MIH	miles in an hour
MOBCON	mobilization movement and control
MP	military police
mph	miles per hour
MRMO	mobilization road movement order
MRMR	mobilization road movement request
MS	mobilization station
MSPS	Mobilization Station Planning System
MST	Mountain Standard Time
MTBSP	mobilization troop base stationing plan
NA	not applicable
NGB	National Guard Bureau
NHPN	national highway planning network
NSN	national stock number
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
OF	optional form
PMC	premaintenance check
POE	port of embarkation
POL	petroleum, oil, and lubricants
RCAS	Reserve Component Automation System
RON	remain overnight
RP	release point
SAT	software acceptance test
SMCC	state movement control center
SOI	signal operations instructions

SOP	standing operating procedure
SP	start point
SPOE	sea port of embarkation
SSD	service support directory
STARC	State Area Command
STRAHNET	strategic highway corridor network
TB	technical bulletin
TC-ACCIS	Transportation Coordinator Automated Command and Control Information System
TM	technical manual
UMC	unit movement coordinator
UMO	unit movement officer
USAR	US Army Reserve
USPFO	US Property and Fiscal Office
wt	weight

Section II. Terms

Average speed--the average number of miles traveled per hour calculated over the whole journey, excluding specifically ordered halts. It is expressed in miles per hour.

Column--a formation in which elements are placed one directly behind the other.

Column gap--the space between two organized elements following each other on the same route. It can be calculated in units of length of time as measured from the rear of one element to the front of the following element.

Column length--the length of roadway occupied by a column in movement, including the gaps inside the column, from the front of the leading vehicle to the rear of the last vehicle.

Convoy--a group of motor vehicles organized for the purpose of control and orderly movement with or without escort protection. For the purpose of this manual it is any group of--

- Six or more vehicles temporarily organized to operate as a column with or without escort, proceeding together under a single commander.
- Ten or more vehicles per hour dispatched to the same destination over the same route.
- Five or less vehicles operating as a column under a single commander if the following conditions exist
  - Any level of mobilizatio/deployment has been ordered.
  - When the movement is conducted in conjunction with, or as a result of, an exercise or annual training.

Convoy commander--the officer or noncommissioned officer in charge of the vehicles and operating personnel or a convoy, designated as such by the person authorizing the movement.

Convoy route--ther specific route assigned to each convoy by the appropriate routing authority.

Express highway--a limited access highway with a minimum of two lanes for traffic in each direction with a median strip separating traffic traveling in opposite directions.

Expresways--high-speed highways, including the interstate highway system freeways, thruways, superhighways, and parkways. Expressways are characterized by the following:

- Ž Controlled access.
- Ž Overpasses and underpasses for cross traffic.
- Ž Center dividing strips.
- Ž Absence or minimum of stop sign or lights.
- Ž Wide lanes.
- Ž Good quality of paving.
- Ž Easy curves and grades.
- Ž Long-sight distances

Gross weight--the combined weight of the vehicle and the load.

Infiltration--the movement of vehicles onto a roadway either in small groups or individually at extended or irrerular intervals so as not to provide a concentration of vehicles at any one given area.

Logistic support--the provision of billets, bivouac areas, meals, POL supplies, and maintenance services at military installations, or the provisions for billets or bivouac areas anywhere along the convoy route.

March unit--a subordinate element of a serial which moves and halts at the order of one commander.

Mobilization movement and control (MOBCON)--a DA-approved program to establish a movement control center in each STARC. The movement control center will collect, analyze, and consolidate all DOD organic movements and develop a master movement plan for mobilization and deployment.

Motor vehicle--a self-propelled boosted, or towed conveyance for transporting a load on land.

Pace--the regulated speed of a column element as set by the pacesetter to maintain the average speed prescribed.

Pass time--the actual time between the movement where the first vehicle passes a given point and the moment when the last vehicle passes the same point.

Rate of march--the average number of miles traveled in a given period of time, including all ordered short halts; it does not include long halts, such as messing or overnight stops. It is expressed in miles in the hour.

Road clearance distance--tie total distance the head of a motor column must travel for the entire column to clear a given section of the mad.

Road clearance time--the total time the head of the motor column must travel for the entire column to clear a given section of the road.

Serial--an element or group of elements within a series which is given a numerical or alphabetical designation for convenience of planning, scheduling, and control. It is the largest element of a convoy, and it moves and halts at the order of one commander.

Special movement--any vehicle movement which consists of or includes any overweight or oversize vehicle, any cargo or explosives or any other dangerous articles, and/or having any requirement for en route logistical support.

State Area Command(STARC)--a mobilization entity within the Army National Guard (ARNG) state headquarters and headquarters detachment that is ordered to active duty when ARNG units in that state are alerted for mobilization. It provides for control of mobilized ARNG units from home station until arrival at mobilization station. It is also responsible for planning and executing military support for civil defense, land defense plans under the respective area commander, and military folly assistance.

State movement Control center (SMCC)--the agency responsible for performing the convoy movement control responsibilities of the Adjutant General of each state.

Superhighway--see Expressway.

Time distance--time required for a vehicle to travel between two points at a prescribed rate of speed.

Time gap--the time which lapses between successive elements of a column as they move past a given point.

Trail element--the last element of a convoy, normally composed of personnel and equipment that provides services to the convoy.

Unit movement officer--a unit officer (or senior NCO) designated by the commander to prepare and maintain appropriate documentation, unit loading plans, and so forth, and to handle all other arrangements for a unit movement.

Vehicle distance--the distance between the rear of a vehicle to the front bumper of the following vehicle.

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