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The Navy Driver's Handbook has been prepared by the Commander, Naval Facilities Engineering Command. This handbook provides detailed instructions to enable drivers of Navy-owned or leased motor vehicles to operate safely, efficiently and in conformance with applicable regulations. Requirements and restrictions are explained in relation to Navy policy, regulations, civilian traffic laws, and the courtesy expected of operators of Navy vehicles. Recommended procedures for operating a vehicle under normal, hazardous, and special conditions are also included.

This handbook is certified as an official publication of the Command and, in accordance with the Secretary of the Navy Instruction 5600.16, has been reviewed and approved. This edition cancels and supersedes NAVFAC MO-403, dated May 1967.

D. G. ISELIN
Rear Admiral, CEC, U.S. Navy
Commander
Naval Facilities Engineering Command
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CHAPTER 1. INTRODUCTION

1.1 PURPOSE. The purpose of this handbook is to present the driver of Navy-owned/operated motor vehicles with instructions for the safe and efficient operation of the vehicle. Accidents/damage caused by improper operation of a motor vehicle is a major drain on Navy financial resources. Application of instructions contained herein will result in increased driver efficiency and minimized expense.

1.2 SCOPE. The requirements and instructions which are presented in this handbook apply to all drivers, or operators of Navy motor vehicles except those under the jurisdiction of the U.S. Marine Corps. Some requirements and instructions do not apply in overseas areas where left-hand driving is the custom. Status of Forces Agreements will govern operations of Navy motor vehicles in overseas areas.

1.3 OFFICIAL USE OF NAVY VEHICLES. Certain restrictions have been placed on the use of Navy vehicles to ensure they are operated in complete compliance with the intent of the phrase "For Official Use Only." Official use is defined as employment, or authorization of employment, of such Navy motor vehicles as may be required for the discharge or performance of an official Navy duty, function, or service; it does not include home-to-work travel except for medical officers on out-patient service or for those engaged in field work. Public Law 600, enacted by the 79th Congress; 5 USC 76(c)(2) establishes this criteria. Section 636a(c)(2) of Title 31, United States Code, further stresses official use and establishes strict definitions of exemptions.
1.4 PENALTIES FOR MISUSE. As further provided by Public Law 600, any official or employee of the Government who willfully uses or authorizes the use of any Government-owned or Government-leased vehicle for other than official purposes shall be suspended from duty by the head of the department concerned, without compensation, for not less than one month. If circumstances warrant, the driver may be suspended for a longer period or summarily removed from his position.

1.5 LOCAL LAWS AND REGULATIONS. When driving Navy-owned or Navy-leased vehicles on public streets and highways, observe and obey all State and local traffic laws or regulations pertaining to the operation of motor vehicles. Local traffic regulations are available at most naval installations.
CHAPTER 2. DRIVER REQUIREMENTS

2.1 QUALIFICATIONS AND AUTHORITY. Laws and regulations have been established that enumerate qualifications for both civilian and military drivers for the Navy. Standard operator's permits and authorization forms have been issued to identify licensed drivers and to control the dispatch of vehicles.

2.2 DRIVER QUALIFICATION AND LICENSING. All persons assigned duties that involve driving or operating Navy vehicles will be governed by the testing and licensing requirements of NAVFAC Publication P-300. Briefly, this requires all civilian personnel operating Government-owned, or -leased vehicles to possess a Standard Form 46, U.S. Government Motor Vehicle Operator's Identification Card, and a valid State license for the type and class of vehicle being operated. The requirement for possession of a SF 46 does not apply to personnel who are on TDY away from their official duty station and whose TDY travel orders authorize the use of a Government-owned or -leased vehicle in performance of their official duties, provided they possess a valid State driver's license. Military personnel are exempt from possession of a SF 46 for operation of Government-owned or -leased general purpose vehicles under 10,000 gross vehicle weight (GVW), provided they possess a valid State driver's license. Military personnel not possessing a valid State driver's license may be issued a SF 46; P-300 requirements and restrictions will apply.

2.3 DISPATCH AUTHORIZATION. Government vehicles are generally assigned to drivers by means of a
written dispatch known as the Motor Vehicle Utilization Record, DD Form 1970. This form is the official authorization and its use is mandatory for all off-station travel. Use of the form for on-station travel is at the discretion of the Commanding Officer. (Figure 1).

2.4 DRIVER’S DUTIES AND RESPONSIBILITIES. Unless otherwise instructed, perform the following preventive maintenance routines each day.

   a. Before Operation. Before operating the vehicle, make the following checks:

      (1) Check tires for proper inflation, Unusual wear and penetration of foreign objects; check to be certain that spare tire, jack, lug-wrench, and other necessary accessories are present and serviceable.

      (2) Check the vehicle visually for any indication of fuel, coolant, lubricating oil, hydraulic fluid, or brake system leaks.

      (3) Check the fuel, engine oil, transmission and power steering fluid, and coolant levels. In season, check antifreeze protection.

      (4) Check lights, horn, signals, mirrors, windshield wipers/washers, and seat belts for proper operation. Check vehicle equipment such as tailgates/racks, side racks, headboards, winches, and towing connections for both proper placement and secure mountings.

      (5) Test the brakes and ensure there is adequate pedal. On air brakes, ensure there is adequate air pressure. A minimum of 60 psi is necessary before moving the vehicle and for brake application.
## FIGURE 1
Motor Vehicle Utilization Record
DD Form 1970
INSTRUCTIONS

1. Date. Enter the calendar date the equipment is to be used.

2. Type. Enter the type of equipment as designated in the equipment log.

3. Registration Number or Serial Number. Enter the equipment registration number or serial number.

4. Administrative Number. Enter the unit number or administrative number.

5. Organization. Enter the organization to which the equipment is assigned.

6. Operator. Enter the name of the equipment operator.

7. Operator's Signature. The equipment operator (can be) will enter signature immediately upon receipt of equipment.

8. Time. Indicate time to the nearest 5 minutes using the 24-hour clock.

9. On. Enter time equipment was returned from dispatch or use.

10. Out. Enter the time the equipment was released for operation by the dispatcher.

11. Focal. Enter total time the equipment was in the possession of the operator. Time is obtained by subtracting the time listed as "On" from the time listed on the "Out" line.

12. Mileage. Will be recorded to the nearest whole mile.

13. Focal. The operator will enter the mileage reading when the equipment is returned. If equipment is improper, enter estimated mileage.

14. Out. The dispatcher will enter the mileage reading at the time of dispatch.

15. Focal. Enter the difference between the "Out" and "On" mileage.

8. Hours. Will be recorded to the nearest whole hour. Do not enter any which require arriving on an hourly basis but are not equipped with an hour meter. Enter the estimated hours of operation.

a. On. Operator will enter the hour meter reading upon completion of the equipment usage.

b. Out. The dispatcher will enter the hour meter reading prior to equipment release.

c. Total. Enter the total hours dispatched for operation.

11. Report To. Enter the name of the individual to whom the operator is to report.


13. Destination. Indicate each location at which a stop begins and ends. Normally this starts from the equipment point ("On" line) and ends at the same place after one or more intervening destinations.

14. Time. All time will be recorded using the 24-hour clock, rounded off to the nearest 5 minutes.

15. Arrive. Enter the arrival time at each destination.

16. Depart. Enter the departure time from the motor pool or other surrounding location.

17. Released By. The person in charge of equipment on dispatch will release by signing on the log indicating the destination where the equipment was released to the operator. Upon termination of equipment usage, but not ensured, the person in charge will record the equipment being released in the log.

18. Remarks. The remarks section will be used by the operator to record unusual operation or abnormal occurrences during operation, or other information as itemized.

FIGURE 1A
DD Form 1970 (Reverse)
b. During Operation. Carefully observe the operation of instruments, brakes, steering, engine, and power-driven units; make notes of actual or suspected malfunctions.

c. After Operation. After operation of the vehicle, perform the following services:

   (1) Clean interior of the vehicle and make sure that all tools and tire-changing equipment are in their proper places. Follow station instructions regarding refueling and exterior cleaning. Trash shall not be left in any part of the vehicle.

   (2) If the vehicle is equipped with air brakes, drain cocks should be opened to drain off condensation. Drain cocks in air storage and reserve tanks should remain open only long enough to ensure that all condensation has evaporated. Then they should be closed. This is especially important in freezing weather. Caution should be used when draining tanks since this will eliminate all service brake power. Ensure that wheels are chocked and parking brakes are applied before draining begins.

d. Reporting Defects. If inspection of the vehicle during any operating phase reveals deficiencies, report them to the supervisor (dispatcher) on Operator's Inspection Guide and Trouble Report, NAVFAC Form 9-11240/13 (12-69) (Figure 2). Indicate any item that does not function properly. Use the space entitled "Remarks" for items not listed or for additional information concerning the deficiencies noted. Additional information may be written on the reverse side of the form. A report of defects should be made both before and after operating a vehicle.
Use this form as a guide when performing before and after operation inspections. Check ( ) items that require servicing by maintenance personnel.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | DAMAGE \(\) (Scratch, Interact, Missing Components) \(\) |
| 2 | LEAKS \(\) |
| 3 | TIRES \(\) |
| 4 | FUEL, OIL, WATER SUPPLY \(\) (Identify on manual) \(\) |
| 5 | BATTERY \(\) |
| 6 | HORN \(\) |
| 7 | LIGHTS, RECESSED \(\) |
| 8 | INSTRUMENTS \(\) |
| 9 | WINDSHIELD WIPER \(\) |
| 10 | CLEAN WINDSHIELD \(\) |
| 11 | CARGO, MOUNTED EQUIPMENT \(\) |
| 12 | CLEAN VEHICLE \(\) |
| 13 | STEERING \(\) |
| 14 | SAFETY DEVICES \(\) |
| 15 | DRIVE BELTS, PULLEYS \(\) |
| 16 | BRAKES \(\) |
| 17 | OTHER \(\) (Specify in Remarks) \(\) |

**FIGURE 2**
Operator's Inspection Guide and Trouble Report, DD Form 1358

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**FIGURE 2**
Operator's Inspection Guide and Trouble Report, DD Form 1358
CHAPTER 3.
OPERATING INSTRUCTIONS
FOR NORMAL CONDITIONS

3.1 STARTING THE ENGINE. Initially, set the parking brake and place the transmission shift lever in the neutral, or park, position. If the vehicle is equipped with special power attachments, see that all power-control levers are in neutral. Fasten the safety belts and proceed as follows:

(1) Depress the clutch pedal in standard transmission vehicles. This disengages the engine from the drive train, relieving the load on the starting motor. Turn on ignition key or switch.

(2) If vehicle is equipped with a manual choke, pull the choke all or part of the way out, depending on climatic conditions. Cold weather starting will require more choke than mild weather. If vehicle is equipped with an automatic choke, depress accelerator pedal to initially set the choke and the high idle cam. Start the engine and adjust manual choke for a smooth idle. Automatic chokes will adjust automatically. Never race the engine to warm-up the vehicle. Avoid excessive idling periods for warm-up purposes.

**WARNING**

Do not start or run an engine in a closed garage. Exhaust gas from internal combustion engines contains poisonous carbon monoxide gas which is odorless, tasteless, and colorless.
Keep garage doors open or connect vehicle exhaust to ventilating system, if available. Ensure adequate ventilation at all times.

3.2 USE OF CLUTCH. The clutch is used only when starting, stopping, or shifting gears. When waiting for traffic lights or during prolonged stops, disengage clutch and shift into neutral. For smooth operation of the clutch, become familiar with the following:

(1) Where the clutch starts to engage
(2) How far to depress the clutch pedal to disengage the clutch
(3) Amount of free travel in the clutch pedal

If assigned a vehicle with an automatic transmission, consult the manufacturer's operator's manual for specific operating instructions.

a. Starting the Vehicle in Motion. When starting the vehicle from a stationary position, push the clutch pedal to the floor and shift into low gear. Increase accelerator pressure gradually while releasing the clutch pedal slowly.

b. Starting the Vehicle on an Upgrade. When starting the vehicle on an upgrade, set the parking brake to prevent the vehicle from rolling back. Increase accelerator pedal pressure and release the clutch pedal as above, simultaneously releasing the parking brake to move the vehicle forward.

3.3 SHIFTING TO A HIGHER GEAR. In each gear, sufficient speed must be built up to avoid lugging the
engine in that gear, and speed must be sufficient so that engine will not labor or jerk when the next highest gear is reached. In practice, with a loaded unit, the engine must be brought close to maximum engine speed in each gear before shifting into next higher gear. To shift into next higher gear, use the following steps:

(1) Push down on clutch pedal and release accelerator. Disengage clutch slightly ahead of releasing accelerator.

(2) While engine speed is dropping, move gearshift lever to neutral.

(3) Release clutch pedal to engage clutch.

(4) Quickly disengage clutch by pushing pedal down and move gearshift lever to next higher gear.

(5) Release clutch pedal and speed up engine at the same time. The above procedure is known as double-clutching and must be used on most manually-shifted truck transmissions. On trucks equipped with synchro-mesh transmissions, shifting is faster and smoother when they are double-clutched.

**WARNING**

Never risk clashing gears by attempting to force transmission into next gear. If transmission cannot be shifted smoothly due to improper timing in double-clutching, stop in a safe place and start over.

(6) Continue shifting up through the gears until the permissible road speed is reached.
3.4 SHIFTING TO A LOWER GEAR. Changing conditions may require reduction of speed and may require down shifting. When it is determined that it is necessary to shift down a gear, do not delay until engine starts to lug before shifting. The following procedure should be used when down-shifting:

(1) Push down on clutch pedal and release accelerator. Move gear shift lever to neutral.

(2) Release clutch pedal.

(3) Accelerate engine with clutch pedal released and transmission in neutral. At this point engine speed must be greater than it was when in the higher gear in order to complete shift smoothly.

(4) Depress clutch pedal and move shift lever to next lower gear.

(5) Gradually release clutch pedal and speed up engine to avoid shock of engaging clutch.

**WARNING**

Do not attempt to force transmission into gear. If shift cannot be completed without clashing gears, leave shift lever in neutral, release clutch, re-accelerate engine and try again.

3.5 USE OF TWO-SPEED AXLE. When operating a vehicle with a two-speed rear axle under load, always shift into the higher speed of the rear axle before shifting into the next lower gear in the transmission. Use the axle speed that will permit normal road speed.
without causing the engine to lug. Always start a loaded truck, equipped with a two-speed axle, in the lower axle range.

3.6 ENGINE COMPRESSION. When stopping the vehicle, the engine compression will provide a degree of braking when the accelerator is released. Do not disengage the clutch until the vehicle, as a result of engine compression and brake application, has almost come to a complete stop. Engine compression can also be used as a brake with automatic transmissions. However, never down shift an automatic transmission when traveling in excess of 30 mph. Use the low gear range during icy driving conditions to reduce the skidding possibility.

3.7 VEHICLE REFUELING. Always turn off the ignition switch to stop the engine while refueling. Do not strike matches, use lighters or smoke in the vicinity of the vehicle during refueling.

3.8 OPERATING FOR FUEL EFFICIENCY. Studies have shown that the average motor vehicle, operated in the fuel efficient manner set forth below, can achieve at least 20 percent more miles per gallon (mpg) than one operated in a normal manner. Motor vehicle operators should be instructed in the following fuel efficient methods and learn how to determine when the vehicle requires maintenance in order to achieve fuel efficiency:

(1) Ensure vehicle is the minimum weight and size for the payload. Remove unnecessary loads, but maximize payloads. Moving the total vehicle weight and its load accounts for 80 percent of the fuel consumed.
(2) Plan and schedule trips that minimize the distance traveled and avoid idling in heavy traffic.

(3) Avoid prolonged engine warm up.

(4) Accelerate slowly, allowing automatic transmission to shift into high gear by easing off accelerator as soon as possible. With a manual transmission, shift into high gear as soon as possible without lugging the engine. Avoid "jackrabbit" starts.

(5) Drive at a steady speed. Anticipate needs for a slower or faster speed to avoid rapid acceleration and braking—both waste energy. Braking dissipates energy in the form of waste heat.

(6) Reduce top vehicle speed to that really necessary. Normally, the best fuel economy is achieved with the transmission in high gear at speeds between 30 and 40 miles per hour (mph). Wind resistance at speeds in excess of 40 mph results in a significant increase in fuel consumption.

(7) Eliminate engine idling while waiting. Idling results in zero miles per gallon of fuel.

(8) Limit use of electrical accessories. Turn off lights and heater blower when not needed.

(9) Limit use of air conditioner. This accessory alone reduces the mileage (mpg) 10 percent below that achievable without its use.
CHAPTER 4.
OPERATING INSTRUCTIONS
FOR HAZARDOUS CONDITIONS

4.1 NIGHT DRIVING. Defensive driving cannot be emphasized more than while driving at night. With reduced visibility and distraction by a myriad of lights from other vehicles, advertising signs, etc., a driver must be especially alert. Fail-safe factors cannot be built into vehicle operators. There are no practical means available to interpose protective barriers, stop other traffic, or provide a fail-safe condition. Every driver is on his own in an environment that comes close to being 100 percent unpredictable. The driver must be prepared for emergencies and control his vehicle speed to ensure adequate stopping distance. One of the greater hazards of night driving is the driver who has been drinking.

Use only low beam headlights in all residential or business areas and when meeting or passing another vehicle. Use headlights during period from one-half hour before sunset to one-half hour after sunrise, and whenever visibility is reduced.

4.2 BAD WEATHER DRIVING. Rain, snow, ice, or fog affect visibility, stopping distance, maneuverability and vehicle control. Follow these suggestions for driving under such conditions:

(1) Adjust the speed of the vehicle to existing conditions.

(2) Increase the normal safe distance between vehicles to allow for wet conditions.
(3) Use tire chains or snow tires on ice or snow; however, they are only an aid to increase traction and will not eliminate the necessity for added caution.

(4) Slow down when approaching bridges, overpasses, and shady areas in the road; surfaces in such areas often freeze before regular roadway surfaces and remain frozen longer.

(5) Keep the outside of the windshield and windows clear of snow, ice, and frost at all times; use extreme caution when driving in fog.

(6) Apply brakes with a light pumping action to prevent skidding; use engine compression to help control the vehicle.

(7) Signal well in advance to warn others of an intended stop or turn.

(8) Use headlights on low beam in order to be seen during rain, fog and other adverse conditions.

4.3 EXPRESSWAY, TURNPIKE, AND INTERSTATE HIGHWAY SYSTEM DRIVING. Those super highways designed for high speed driving require drivers to be more skillful and alert to avoid accidents. Federal law limiting speed to 55 miles per hour has reduced the hazard to some degree. However, there are many drivers using these highways that do not obey the posted speed limits. These are the drivers that you must be alert for, especially when entering super highways and when changing lanes. Wherever there is the slightest doubt, yield to traffic before making a maneuver. While traveling, allow necessary distance between vehicles for safe stopping; avoid highway hypnosis by
making rest stops. Ensure adequate ventilation and never exceed posted speeds. During emergencies, get the vehicle off the roadway; use flasher lights and approved warning signals to alert other motorists. When leaving the highway, get in proper lane well before the turn-off, and use turn signals to warn other drivers.

4.4 BRAKES. Drivers must be conscious that it takes time and distance to stop a moving vehicle and that sufficient distance must be allowed to avoid the necessity for sudden stops that are hard on equipment and in many instances may be the direct cause of an accident. Brakes should be applied with steady pressure at the beginning of a stop and then eased off as vehicle slows down. Just before vehicle comes to a complete stop, brakes should be released to avoid jerk and rebound and then applied again to hold vehicle while it is stopped. Brakes should not be fanned (alternately applied and released) except on slippery pavement where this type of braking gives better control, reduces the danger of skidding, and gives a shorter stop. Fanning brakes serves no useful purpose on dry pavement. Drivers of vehicles equipped with air brakes should be aware that fanning brakes wastes air and should be done cautiously.

When driving through water, reduce speed to prevent brake drums, engine, and ignition from getting wet. A good procedure is to apply the brakes lightly to reduce the clearance between drums and linings when traveling through other than normal rain water. If brakes still get wet, continue a slight drag on the brakes in order to generate enough heat to dry out the brakes.

4.5. CORRECTING FOR A SKID. If a vehicle skids, steer in the direction of the skid to regain control.
Sometimes a light pressure on the accelerator may help bring the vehicle under control. Do not shift to neutral. Do not apply brakes as this may lock the wheels. Correction for skidding is shown in Figure 3.

**FIGURE 3**
Correcting for a Skid
5.1 DRIVER'S OBLIGATIONS TO PASSENGERS. The driver of a Navy vehicle used to transport military or civilian personnel has special obligations to his passengers in addition to the responsibility previously described for the operation of the vehicle. These obligations are described in this section.

5.2 BUSES, TRAILER BUSES, AND TRUCKS USED TO TRANSPORT PERSONNEL. When carrying personnel in a bus, trailer bus, or truck, follow the directions given below to provide safe and efficient transportation.

a. Control of Passengers. Permit only authorized passengers to ride in the vehicle. Permit passengers to ride only when they are completely inside the vehicle; do not permit passengers to extend legs or arms outside the vehicle when it is in motion.

b. Boarding. Permit passengers to board and leave the vehicle only after it is stopped completely.

c. Exits. Secure all doors, gates, and ramps before moving the vehicle.

d. Passenger Seating. Require all passengers to remain seated when the vehicle is in motion; allow standing only if the vehicle is equipped with hand straps, railings, or stanchions. Passengers are prohibited from riding in the doorwell or in such a position as to obstruct the operator's view.
e. Discharging. When discharging passengers, stop the vehicle at the curb, on the shoulder, or to the extreme right of the roadway.

f. Starting and Stopping. Start and stop the vehicle slowly.

g. Baggage. Secure all equipment and luggage carried in the vehicle to prevent shifting of load and possible injury to passengers.

h. Laws and Regulations. Comply with Federal, State, and municipal laws and regulations pertaining to the operation of personnel-carrying vehicles when driving on public streets or highways.

5.3 TRANSPORTING WORK CREWS. Work crews may be transported only in vehicles equipped with side and end enclosures that are at least 36 inches high, measured from the floor of the vehicle. Only the personnel assigned to the work may be transported in cargo-carrying vehicles. Determine whether one vehicle is sufficient to safely transport both personnel and equipment; if not, request a second vehicle. Secure the tailgate and all equipment before starting; see that work crews are seated.

5.4 AMBULANCES. Emergency ambulance runs may be made only when authorized by standing orders of the Commanding Officer, or as conditions dictate.

a. Speed Limits and Traffic Regulations. When operating an ambulance, obey all speed limits and other local traffic regulations. When making emergency runs, do not violate traffic regulations unless ordered to do so in writing by the authorized officer.

b. Ambulance Warning Lights and Sirens. The use of red lights and sirens is authorized only on emergency
runs. Since right-of-way is not assured through their use, approach street intersections and other points of danger at reduced speeds to avoid collisions with vehicles or pedestrians.

5.5 SEAT BELTS. Comply with local directives and regulations for the use of seat belts. One seat belt should be available for each person. Remind passengers to fasten their seat belts before starting the vehicle.

a. Fastening the Seat Belt. After positioning the front seat, fasten the safety pelvic belt around your hips. Insert the latch into the buckle and make sure the latch-to-buckle connection is secure. Adjust the pelvic belt so it fits firmly to the hips by pulling the end of the belt protruding from the buckle. With retractor equipped belts, pull the retractor-half of the belt to a solid stop to make sure that the belt webbing is completely unwound from the retractor drum; connect the belt, and then adjust the buckle on the belt for a snug fit. Passengers riding in vehicles equipped with shoulder belts must always wear them in conjunction with pelvic belts. Shoulder belts should be tightened only to the point where controls-and switches can be easily reached without restriction from the belt. Proper usage and care of these belts will provide added security to driver and passenger in case of sudden, unexpected stops.

b. Care of Seat Belts. Clean the belts with a mild solution of soap and lukewarm water. Do not bleach or redye the belts as this may cause severe loss of strength. Keep sharp instruments and other damaging objects away from the belts. Periodically, inspect the belts and the retractors for damage and report any noted deficiencies.
6.1 VEHICLE LOADING. Improper distribution of cargo in a truck or trailer shortens the life of tires, axles, brakes, and other parts. Although a truck or trailer may not be overloaded beyond the gross vehicle weight capacity, individual tires and axles may still be overloaded by faulty distribution of cargo. Some examples of proper placement of load are shown in Figure 4.

a. Determining Center of Load. To properly load a truck or semitrailer unit, determine the center of payload. In a truck, the center of payload is the center of the body, or at the point midway between the rear of the driver's cab and the tailgate. In a truck-tractor semitrailer unit, the center of payload is roughly the center of the semitrailer body, because the front wheels of the tractor seldom carry any of the payload. Whenever possible, distribute the load so that each axle bears an equal proportion of the load within the given weight capacity of the vehicle. Examples of approximate distribution of total weight are shown in Figure 5. No vehicle shall be loaded over its rated capacity without direct authorization.

b. Vehicle Capacity. Determine the truck or trailer capacity (payload limit) before leaving the dispatcher's office. The capacity may be obtained from the Navy registration data plate in the vehicle. If the capacity is not stated on the plate, determine the
Do not place very heavy concentrated load against cab. Such position may cause frame to bend—perhaps permanently—or cause blow out from overload on front tires. Truck steers hard, and load may be top-heavy.
Position heavy concentrated load near rear and on its long side if possible. Most weight should be over and just ahead of rear axle to prevent bending frame and to load tires properly.

Do not place very heavy load toward side of truck. Such position overloads spring and tire on loaded side and may cause brakes to lock on light side resulting in flat spots on tires and tendency to skid.
To distribute equal weight on all rear tires, place load evenly between sides. Eliminates twisting of frame and overloading spring, tire, and axle bearing.

Never permit concentrated load behind rear axle. Such position bends frame, overloads rear tires, and makes steering ineffective by lifting weight from front wheels.
See part B, above.

Do not use improper vehicle for the load. In addition to dangers described in part F, above, on rough roads truck can pivot on rear axle and lift front wheels off road.
Use of proper type and size vehicle for service required prevents damage to vehicle and possible serious accidents.

FIGURE 4
Placement of Payload
The above diagram shows the design of trailers for uniform load distribution. When loading trucks, design provides for ±90% payload on rear tires and 10% on front tires; when loading trailers, distribute payload equally between rear tires and fifth wheel which transfers its load to the truck tractor.

Do not load the trailer with payload concentrated at the front. Such placement overloads the tractor rear tires, reduces tire mileage, and may bend the tractor axle housing. If brakes are applied suddenly, trailer brakes may lock, causing flat spots on tires and dangerous skidding.

Distribute load over the full length of the trailer bed, or place concentrated load in the center of the trailer.

**Never position payload as shown at left. Load on tailgate of truck 1 and trailer 3 causes severe strain on frames, axles, tires, and brakes.**

Overload on rear of trailer 2, and almost no load on fifth wheel, permits truck-tractor drive wheels to slip, causing excessive tire wear and uneven braking distribution.

**FIGURE 5**
Distribution of Total Weight
payload by subtracting the shipping weight from the gross vehicle weight; subtract 300 pounds to compensate for the weight of the driver and fuel. The weight of the load may be obtained from the loading agency at the pick-up point. Contact the supervisor for clarification of special load weight prior to departure.

c. Condition of Material. Check material for damage before and during the loading operation. Do not accept damaged material unless the damage is noted on the dispatch order or written acknowledgment of the damage is received from the shipping department.

d. Securing the Load. Secure the load with binders or other approved devices to prevent shifting during transit. Use appropriate gear to protect fragile items from damage by chafing.

e. Special Load Warning. When transporting pipe, lumber, or other unusually long loads which extend beyond the truck body, attach a red flag to the end of the load; use a red light to mark the end of the load when traveling at night.

6.2 OVERSIZE AND OVERWEIGHT VEHICLES. Before operating a truck or trailer loaded with unusually heavy, long, or odd-sized loads, make sure the load weight and dimensions are within the prescribed state and local regulations. If oversize or overweight vehicles or loads are required for a particular job, ensure special permits are in your possession prior to moving such loads or vehicles on public highways.

6.3 ROAD CLEARANCE. Road clearance figures indicate the maximum space available for a vehicle to
pass under or through a structure. Road clearance is posted at the approach to a tunnel, underpass, bridge, or other structure, or is marked on the structure itself. The road clearance required for a vehicle is (a) the total height of the vehicle and any part of the load which may extend above the vehicle, (b) the total width of the vehicle and any part of the load which may extend beyond its sides, and (c) the free space required to maneuver the vehicle and load. Usually, the word CLEARANCE on a sign indicates distance from the road to the overhead obstruction, while MAX WIDTH is used for the space between obstructions at the sides or between one side and oncoming traffic lanes.

a. Overall Height and Width. Determine the overall height and width of the vehicle and load before leaving on the trip. Be sure that the tires are inflated properly before getting the height; if air is added to the tires, the overall height may be increased. Be sure that load tie-downs are properly secured; even if the load cannot break loose, the overall width may be increased if the load twists laterally on the truck. Write the height and width of the vehicle on a pad or the driver’s log for reference during the trip.

b. Maneuverability. In addition to the actual height and width, sufficient free space within specified height and width limitations is required to compensate for the constant up-and-down motion which occurs while operating the vehicle; similarly, a constant side-to-side compensation for sway is required. Both the vertical and horizontal motion can be controlled by reducing the vehicle speed. However, the driver should allow several inches of free space for such maneuvering when he compares his vehicle and load with the posted clearance.
6.4 TRANSPORTING EXPLOSIVES. When transporting explosives, adhere to all military instructions, State and local laws, and Department of Transportation (DOT) regulations concerning transportation of such material. Refer to Driver's Handbook Ammunition, Explosives, and Dangerous Articles, NAVSEA OP 2239 when assigned to carry ammunition, explosives, and dangerous articles.
CHAPTER 7.
TRUCK-TRACTOR AND SEMITRAILER

7.1 CHECKING A TRUCK-TRACTOR AND A SEMITRAILER. Before coupling a semitrailer to a truck-tractor equipped with vacuum or air operated brakes, make the following checks:

(1) Are the air hoses serviceable?

(2) Are the coupling and braking equipment in proper working order?

(3) Are the couplings, including seals, clean and working freely?

(4) Are the cutout valves in proper order?

(5) Are the semitrailer king pin, locking device, and coupling functioning properly?

(6) Is the tractor's fifth wheel properly lubricated and moving freely?

7.2 COUPLING THE TRUCK-TRACTOR TO THE SEMITRAILER. To couple the truck-tractor to the semitrailer, proceed as follows:

(1) Place wheel chocks in front of and behind the trailer wheels.

(2) Make sure the fifth wheel hook is open; then, back the tractor close enough to the trailer to permit coupling of the brake lines.
(3) Connect the brake hoses in the proper order.

(4) Open the cutout valves, if so equipped, or actuate the trailer charge valve to allow pressure to build up in the reserve tank on the trailer.

(5) Apply pressure to the trailer brakes, using hand valve, if they are operated independently. If the trailer brakes are not operated independently, proceed as described below.

(a) For vacuum operated brakes, turn off the service line valve and disconnect the hose; this should automatically apply pressure to the trailer brakes.

(b) For air operated brakes, turn off the emergency line valve, if so equipped, and disconnect the hose; this should automatically apply pressure to the trailer brakes.

(6) Back the tractor under the trailer until the fifth wheel engages the trailer king pin and locks. If the tractor is not in line to engage the trailer king pin and must be repositioned, uncouple the air hose before moving the tractor to avoid breaking the hose.

(7) When the fifth wheel and the king pin are locked, test security of the hookup. Remove the chocks, and place the tractor in first gear; engage the clutch; and move the tractor forward slightly while applying pressure to the trailer brakes.

(8) If the trailer is properly connected, stop the tractor and set the parking brake; double check all couplings, reconnect the brake air hose, and open the air valve, if so equipped.
9. Connect the trailer electrical power line; check for proper operation of lights and, where applicable, heating or refrigeration equipment.

10. Raise the trailer parking legs, and release the trailer parking brake, if so equipped.

11. Before moving the tractor, check the brakes for proper functioning and for adequate air pressure; minimum operating air pressure is 60 pounds.

7.3 UNCOUPLING TRUCK-TRACTOR FROM SEMITRAILER. To uncouple a truck-tractor from a semitrailer, proceed as follows:

1. Set the tractor parking brake.

2. Apply pressure to the trailer brakes by disconnecting the hose lines, as described above, paragraph 7.2, step (5).

3. Disconnect the trailer electrical power lines and secure them to the tractor.

4. Place wheel chocks (if used) in front and behind the trailer wheels and set the trailer parking brake.

5. Lower trailer parking legs; be sure the ground is firm enough to prevent the parking legs from sinking.

6. Place the fifth wheel hook lock handle in the release position; move the tractor forward slightly, leaving the trailer king pin partly in the fifth wheel slot.

7. Recheck the trailer supports; if trailer is secure, move the tractor away from the trailer.
7.4 TRACTOR-TRUCK AND SEMITRAILER BRAKES. Improper operation of brakes on tractor-trailers and semitrailers may be hazardous. Great care should be taken to prevent accidents.

(1) Parking. When a tractor-trailer unit is parked and the tractor air compressor is not in operation, do not depend solely on setting the air or vacuum brakes to secure the vehicle. The air or vacuum pressure may leak and release the brakes. To secure the vehicle, apply the tractor parking brake and place wheel chocks at trailer wheels.

(2) Independent Trailer Brakes. When towing a trailer with independently operated trailer brakes (controlled from a separate lever), apply the trailer brakes slightly in advance of the tractor brakes. This is especially important, when towing a full trailer, to prevent the trailer from “running-up” or “jack-knifing” on the tractor when making sudden stops or when descending hills.
CHAPTER 8.
EMERGENCY ROAD SERVICE

8.1 PRETRIP PREPARATION. Service the vehicle prior to departure in order to reduce purchases of supplies or services during the trip. Request a list of locations of Government gasoline/diesel outlets in the area in which your vehicle will be operated, and utilize the facilities of other Government agencies when operating away from your home base. If commercial purchases are necessary, limit them to gasoline/diesel, lubricants, and services required to enable you to reach your destination or Government service area.

8.2 BREAKDOWN OF NAVY VEHICLES ON THE ROAD. If a vehicle breaks down while you are away from your home station, contact the transportation office of the nearest military activity. If emergency breakdown occurs on the highway, proceed as follows:

1. Whenever it is possible, move the vehicle off the road even if it requires driving with a flat tire. Set out triangle reflectors to warn oncoming traffic.

2. If this is not possible, set out triangle reflectors or lighted flares (fusees). Flares are not to be carried or used when transporting hazardous cargo.

3. Do not attempt repairs while the vehicle is in an exposed position on the road.

4. If breakdown occurs on your station, contact the supervisor, dispatcher, or base
maintenance crew either by radio, telephone, or by
requesting a passing driver to make the call for you.
(For emergency telephone numbers, see Appendix A.)

8.3 PURCHASES ON THE ROAD. Emergency
purchases (not made by U.S. Government National
Credit Card, Standard Form 149, as described below)
may be authorized by using U.S. Government Purchase
Order-Invoice Voucher, Standard Form 44. In the
absence of full details for completing the form, fill in
the dealer's name and address, the description of items
purchased (including unit and total price), the vehicle
registration number, and your name. Prepare four
copies (original and three copies) of the
Purchase-Invoice Form; give the white and yellow
copies to the person furnishing the material or service,
and turn in the pink and blue copies to your supervisor
at the end of the trip.

8.4 CREDIT CARD USE. A U.S. Government National
Credit Card, Standard Form 149, is frequently issued
to purchase fuel and minor supplies or services during
long trips. Use the SF 149 credit card to purchase only
the following supplies and services:

(1) Gasoline (regular grade only, except on
vehicles which require unleaded fuel or those older
vehicles which require higher octane fuel). Use self
service fuel islands whenever possible;

(2) Lubricating oil;

(3) Oil filter elements;

(4) Antifreeze products;
(5) Cleaning of permanent type air filters (or replacement of throw-away type);

(6) Spark plugs; belts for generator, pumps, and similar equipment; and light bulbs;

(7) Repair of tires and tubes;

(8) Lubrication;

(9) Battery charging;

(10) Washing (where Government-owned car washing facilities are not available and the expense of moving the vehicle to a support area exceeds the cost of the commercial washing).

All purchases must be substantiated by a receipt; the name, grade, and organization of the driver, the license or registration number of the vehicle, and its speedometer reading must be included. All delivery receipts must be turned in at the completion of each trip.
CHAPTER 9.
RULES OF THE ROAD

9.1 TRAFFIC SIGNS. Traffic signs warn drivers of traffic conditions, limitations, and potential dangers ahead. The shape of the traffic sign indicates the class of limitation or type of warning.

a. Stop Signs. Stop signs are red octagonal signs (Figure 6); a complete stop must be made at such signs,

b. Yield Signs. Yield signs are red triangular signs with block lettering (Figure 7). At such signs, traffic must yield right-of-way to vehicles on the intersecting road; they are used to control the flow of traffic onto or across a road or highway on which the volume of traffic usually is light enough to permit entering the intersection without making a full stop. When approaching yield signs, slow down, enter the intersection cautiously, and be prepared to yield the right-of-way. If traffic is approaching on the other road, stop and wait for a clear, safe space.

c. Speed Limit Signs. Speed limit signs are white rectangular signs with black letters and numerals indicating speed limits (Figure 8). The stated limit is the highest speed considered safe under normal traffic conditions when the roadway is dry. This speed should be reduced at night, when traffic is heavy, and during bad weather. Never exceed the posted maximum speed limits. Reduce speed signs may
precede a speed limit sign, are similar to it, and bear the notation “Reduced Speed,” usually above the sign (Figure 9).

d. Warning Signs. Warning signs are diamond shaped signs (Figure 10) warning of permanent physical road hazards that require reduction of normal road speed and/or special action.

e. Regulatory Signs. Regulatory signs are red signs (Figure 11) indicating a regulated action such as “No Right Turn,” “Yield,” “Do Not Enter.”

f. Informational Signs. Informational signs are either blue for motorists services (Figure 12) or green for direction or guidance, such as freeway direction signs. Brown is used for public recreation information and scenic guidance.

g. Construction Signs. Construction signs are usually triangular orange painted with block lettering.
They serve as a warning that construction work is ahead and may indicate a speed limit through the construction area. They may also warn that a flagman is ahead.

h. Railroad Crossing Signs. Railroad crossing signs are usually of two types (Figure 13): a circular sign with an “X” and the letters “RR,” placed at some distance from the railroad tracks, warns drivers that the tracks are ahead; a sign made only of crossed bars and bearing the words “Railroad Crossing” may be placed immediately at the crossing.

9.2 TRAFFIC SIGNAL LIGHTS. Signal lights are used to control traffic movement at intersections or especially hazardous locations and to indicate traffic lanes which may be used. They vary slightly in different localities, but the colors usually indicate the restriction or action described below.
FIGURE 10
Warning Signs
REGULATORY SIGNS

FIGURE 11
Regulatory Signs
INFORMATIONAL SIGNS

FIGURE 12
Informational Signs

WHITE ON BLUE INDICATES MOTORISTS SERVICES

WHITE ON GREEN GIVES DIRECTION OR GUIDANCE
<table>
<thead>
<tr>
<th>Color</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>stop</td>
</tr>
<tr>
<td>Flashing Red</td>
<td>Stop, proceed with extreme caution</td>
</tr>
<tr>
<td>Green</td>
<td>Proceed</td>
</tr>
<tr>
<td>Amber</td>
<td>Clear intersection for other traffic</td>
</tr>
<tr>
<td>Flashing Amber</td>
<td>Slow down, proceed with caution</td>
</tr>
</tbody>
</table>

9.3 DRIVING IN THE PROPER LANE. Traffic regulations require the driver to operate a vehicle in the right-hand lane, except when overtaking a vehicle moving in the same direction at which time the driver may use the left lane if it is clear of all traffic and has the space required to pass. Multiple-lane highways allow drivers to pass or change lanes in preparation for a turn either to the right or left (Figure 14). If the traffic is heavy, avoid changing lanes and maintain constant safe speed to conform with traffic movement.
FIGURE 14
Driving in Proper Lane

2 LANES
- USE LEFT LANE WHEN SAFE TO OVERTAKE
- NEVER DRIVE IN LEFT LANE
- Normally drive in right lane

3 LANES
- USE CENTER LANE WHEN SAFE TO OVERTAKE
- USE CENTER LANE TO MAKE LEFT TURNS
- NEVER DRIVE IN LEFT LANE

4 OR MORE LANES
- USE OTHER LANES ON YOUR SIDE ONLY TO OVERTAKE
- USE LANE ON RIGHT OF CENTER LANE TO MAKE LEFT TURN
- Normally drive in right hand lane

LINES ONLY WHEN SAFE
9.4 SPECIAL CONDITIONS. Local regulations or statutes, temporary signs and emergency signals, and directions of traffic officers take precedence over general rules of the road and other conditions or privileges, including right-of-way.

9.5 PRIVILEGES AND RESTRICTIONS. A driver of a vehicle traveling in the right-hand lane of a road without making any signal for stopping or turning has the right-of-way; that is, he has the right to continue traveling without interference, except under the special conditions described in paragraphs 9.6 and 9.7, which require him to yield his privileges to another person. Failure to observe the rules of right-of-way causes many accidents; even when you know that you have the right-of-way, be sure that the other driver will stop or yield before you proceed. Remember that the other driver may not know that you have the right-of-way; always keep your vehicle under control and be ready to stop.

9.6 REQUIREMENTS TO YIELD. Yield the right-of-way as indicated by signs, traffic signals, and traffic officers and as required by conditions described below.

a. Emergency Vehicles. Yield to any police, fire, or rescue vehicle which shows flashing lights and/or sounds a siren, bell, or horn.

b. Convoys and Processions. Yield to military convoys, civil convoys with police escort, and funeral processions.

c. Passing Vehicles. Yield to drivers that are overtaking and passing your vehicle; adjust your speed to allow sufficient space and time for the other vehicle to pass safely and return to the right-hand lane.
d. Pedestrians. Yield to all pedestrians. If a pedestrian stops to permit you to pass, you may do so; but, as common courtesy, do not force pedestrians to stop and yield for your vehicle.

e. Horses and Bicycles. Yield to riders of horses or bicycles, and to horse-drawn vehicles. Like pedestrians, these people are particularly handicapped because (although they must follow the laws and regulations for traveling on public roads) they lack the speed, maneuverability, and protection available to the driver of a motor vehicle. Drivers of motor vehicles should show consideration for these conditions.

9.7 INTERSECTIONS. Most accidents that occur at intersections are the result of poor judgment and failure to yield the right-of-way (Figure 15). When in doubt, yield to other traffic. Signs and signals usually reduce the possibility of such accidents.

a. Intersections Without Signals or Signs. Yield the right-of-way to vehicles approaching from the right and to those that have already entered the intersection.

b. Left Turn Right-of-Way. Yield the right-of-way to a vehicle making a left turn across your route if the vehicle has started to turn before you reach the intersection.

9.8 TURNING SAFELY. Turning safely requires that you know where you want to make a turn and prepare for it well in advance of the turn-off point. Prepare for turns by checking the position of other vehicles.
FIGURE 15
Right-of-Way at Intersections
around you, turning on the vehicle turn signals, and moving into the proper lane. Such simple courtesies (usually they are traffic regulations as well) will reduce confusion and danger of causing accidents.

9.9 RIGHT AND LEFT TURNS. On two-lane streets or highways, all turns should start and end in the right lane; Figures 16A and 16B illustrate the correct method for making such turns. On streets or highways with four or more lanes, right turns should start and end in the extreme right lane; left turns should start and end in the lane just to the right of the center line.

9.10 U-TURNS. Making U-turns is extremely dangerous because it interferes with the normal traffic moving in more than one direction, and it requires much more space and time than do other turns.

   a. Restrictions. Traffic laws in many areas prohibit U-turns at intersections, on hills, or at blind curves. Even where traffic laws do not restrict such turns, good driving practice demands that they be avoided.

9.11 OVERTAKING AND PASSING. When overtaking and passing other vehicles on the road, observe the common rules for passing. Use extreme caution whenever passing a vehicle if the view immediately beyond the other vehicles is blocked on that side.

   a. Speed Factors. The greater the speed of the vehicle ahead, the more road space and time required to overtake and pass the vehicle.

   b. Restrictions. When passing a vehicle, the prohibitions listed below shall be observed strictly.
1. Far before the corner, move over to the right side

2. Begin turn signal and start slowing down at least 100 feet from corner

3. If you signal with your arm be sure both hands are back on the wheel before actually making the turn also look right and left before turning

4. Keep as close as possible to right

FIGURE 16A
Making a Right Turn
5. AFTER COMPLETING TURN, GRADUALLY MOVE OVER TO RIGHT

4. ENTER STREET JUST TO RIGHT OF CENTER

3. IF YOU SIGNAL WITH YOUR ARM BE SURE BOTH HANDS ARE BACK ON THE WHEEL BEFORE ACTUALLY MAKING THE TURN AND LOOK BOTH WAYS BEFORE TURNING

2. BEGIN TURN SIGNAL AND START SLOWING DOWN AT LEAST 100 FEET FROM CORNER

1. WELL AHEAD OF THE TURN, LOOK FOR ANY FOLLOWING CARS AND MOVE OVER CLOSE TO CENTER LINE, GIVING SIGNAL IF NEEDED FOR MOVING OVER

FIGURE 16B
Making a Left Turn
(1) Do not pass at an intersection or railroad crossing (Figure 17A and B).

(2) Do not pass to the right of another vehicle, except on multiple-lane highways (more than two lanes of traffic moving in one direction) where such passing is permitted; use extreme caution in such instances.

(3) Do not pass on a hill or curve (Figure 17D and E), except on multiple-lane highways (see above).

(4) Do not pass a vehicle that is signaling to turn or to move into your lane of traffic, or one that has started to overtake and pass another vehicle.

(5) Do not pass when the centerline of the road is solid on your side or in your lane (Figure 17C).

9.12 STOPPING AND SIGNALING. A driver is required to stop his vehicle in accordance with traffic regulations and instructions from his superiors. Similarly, a driver must give certain warning signals before stopping or turning to protect other drivers and pedestrians and to avoid confusion.

a. Stopping. A driver shall bring his vehicle to a full stop under the conditions described below.

1) Stop when a traffic signal is red or is flashing red.

2) Stop where a STOP sign is posted.

3) Stop upon signal of military or civilian traffic officers.
FIGURE 17
Improper Conditions for Passing
(4) Stop when a traffic signal is amber before your vehicle enters an intersection. If the signal turns amber after your vehicle enters the intersection, you are required to move through and clear the intersection.

(5) Stop for a flashing red light, a siren, or bell warning of emergency vehicles approaching from ahead, the back, or either side. Whenever possible, move your vehicle to the extreme right of the road to allow the maximum passing space and visibility for the driver of the emergency vehicle (Figure 18).

(6) Stop for the red flashing lights of a school bus, whether you are overtaking or meeting the bus, which has stopped or is stopping for passengers to board or leave the bus. (According to the State, this requirement varies; read the laws for the States in which you are driving.)

(7) Stop all vehicles that are carrying passengers or hazardous cargo at every railroad crossing. Look to both the right and left, and listen carefully before moving into the tracks; open the front door or window of the vehicle to improve your ability to hear an approaching train. Stop all vehicles at railroad crossings where there are no signal lights, bells, or automatic gates to warn of approaching trains. Where such lights or bells are installed, do not move the vehicle onto the tracks while any warning signal is operating. Although the crossing is cleared by the train which passed, another could be approaching but be hidden by the first train or a curve.

b. Signaling. Use arm or mechanical signals to warn other drivers and pedestrians of your intended actions (Figure 19). In many cases (such as when
FIGURE 18
Stopping for Emergency Vehicle
FIGURE 19
Making Proper Arm Signals
pulling away from a parking space at a curb), an arm signal can be seen and understood easier than a flashing light at the rear of your car—especially if there is another vehicle parked behind yours. Giving a signal does not give you the right-of-way; a signal merely avoids confusing the other drivers, and helps them and you to avoid accidents.

c. Using the Horn. The horn shall be used only as a warning signal. Using the horn is not a substitute for yielding the right-of-way.

9.13 STOPPING DISTANCES. As the speed of a vehicle increases, the distance required to stop increases at a much greater proportion. For example: a car traveling at 20 mph may stop within 43 to 47 feet, according to road conditions. But, at 60 mph, it will not stop in less than 251 feet, and may require up to 366 feet. Although the speed was tripled, the stopping distance, under ideal conditions, increased at least 5 times (Figure 20).

a. Driver Reaction Time. It takes a great deal more braking power and requires a much greater distance to slow a vehicle from 50 to 40 miles per hour than it does from 30 to 20 miles per hour. A careless driver, failing to recognize or properly understand this fact, may enter curves at too high a rate of speed or fail to maintain the proper interval between vehicles moving at high speeds. Vehicle brakes cannot be applied instantly. You may be surprised at the distance your vehicle will travel from the time you take your foot off the accelerator and depress the brake pedal until the brakes actually take effect. At 40
FIGURE 20
Speed as a Factor of Stopping Distance
A. Following Too Closely. Most rear-end collisions are caused by following too closely; this action is one of the four major causes of accidents. As shown above, the distance required to stop a car increases greatly as speed is increased. A guide for estimating safe distance when following another vehicle, at least at the lower speeds, is: Allow at least 1 second for every 10 feet of vehicle length. This is 2 seconds for the average car. Pick a point on the road, or along side of the road. When the rear of the vehicle ahead passes this point, start counting; 1001, 1002, 1003, etc., until the front of your vehicle is at the same point. The higher the speed, the greater the interval becomes for the same count (Figure 21). The danger of rear-end collisions can be reduced by decreasing your speed, allowing sufficient space between your car and those ahead, and giving proper signals. The injuries to passengers and driver that result from such collisions can also be reduced by consistent use of seat belts.

9.14 PARKING. The following procedures are basic operating guides for parking vehicles under both normal and emergency conditions.

a. Parallel Parking. Most metropolitan areas require parallel parking. To park efficiently, the initial position in which the parking vehicle pulls up parallel with the car ahead (Figure 22) is important. Avoid parking with curb-side wheels against the curb,
or more than 8 inches away from the curb. Always use the door on the curb side when leaving or re-entering the parked car. Always set the handbrake.

b. Parking on a Hill. When parking on a hill, set the brakes and leave the vehicle in gear. When possible, the front wheels should be turned in toward the curb, so as to use the curb as a wheel chock (Figure 23). When no curb exists, turn the wheels so the car would roll away from the road if it broke loose while parked.

c. Parking on Highways. When an emergency occurs on a highway, move the vehicle as far to the right as possible; when condition of the shoulder permits, move completely off the traffic lanes (Figure 24) to avoid interfering with other traffic.

Use 1-way flashers to warn motorists that you are stopped. Follow procedures described above in 8.2, Breakdown of Navy Vehicles on the Road.

---

**FIGURE 21**

Proper Intervals for Following
A. STOP EVEN WITH CAR AHEAD OF OPEN SPACE AND ABOUT 2½ FT AWAY FROM CAR

B. TURN WHEEL SHARP RIGHT AND BACK UP SLOWLY INTO OPEN SPACE

C. WHEN CLEAR OF CAR AHEAD TURN WHEELS SHARP LEFT AND BACK UP SLOWLY TOWARD CAR IN REAR

D. TURN WHEEL SHARP RIGHT AND PULL TOWARD CURB IN CENTER OF PARKING SPACE

FIGURE 22
Parking Parallel to Curb
A. FACING DOWN HILL
TURN FRONT WHEELS INTO CURB

B. FACING UP HILL
TURN FRONT WHEELS AWAY FROM CURB

C. FACING UP OR DOWN HILL WITH NO CURB
TURN WHEELS TOWARD SHOULDER

FIGURE 23
Parking on a Hill
When parked in an unsafe location, place flares, or kit reflectors, at proper intervals at back and front of the vehicle (Figure 25). Flares are for temporary use until kit reflectors can be set out.

d. Unattended Vehicles. Parked vehicles which are to be left unattended must be secured properly to protect the public and Government property.

e. Public Areas. When securing a vehicle on a public street or unattended public parking lot, always lock the ignition and remove the keys, set the handbrake, put the vehicle in park or reverse gear, close the windows, and lock the doors. To secure vehicles that are equipped with a toggle ignition switch instead of a key-locked switch, turn the steering wheel sharply to its limit, run a short chain through the steering wheel, and padlock the chain ends to a safety strap eyebolt.

f. Military Areas. When parking vehicles which are to be secured for the night or stored in military parking areas, always lock the ignition and remove the keys, set the handbrake, set the transmission in park or reverse, and close the windows. Remove all tools or other cargo which are not part of the vehicle equipment.

g. Other Considerations. When parking, always observe the rules listed below:

(1) Do not block access to fire hydrants. (Local regulations vary, but maintain a minimum clearance of 20 feet).
FIGURE 24
Parking on Shoulder of Highway

FIGURE 25
Emergency Parking on Highway
(2) Do not park in spaces designated as emergency areas or NO PARKING zones.

(3) Do not park in or block access to a driveway, crosswalk, an area posted as an entrance, or funeral parking space.

(4) Do not park too close to an intersection. (Local regulations vary, but maintain approximately 50-foot clearance.)

9.15 BACKING. Before backing a vehicle for even a short distance, the vehicle operator will ensure that the area of the rear of the vehicle is clear, (free of persons or obstructions). This is especially important when backing a closed vehicle such as a van, truck or truck tractor and trailer where visibility is limited to use of mirrors. The areas directly behind these vehicles cannot be reflected in the mirror image. In such cases, the vehicle operator will dismount and inspect the area to the rear to be sure it is safe to proceed. When possible, request assistance from someone to guide you. Never open either door while vehicle is in motion.
10.1 ACCIDENT REPORTING REQUIREMENTS. The driver shall report every accident involving a Navy vehicle in any way, using the Operator's Report of Motor Vehicle Accident, Standard Form 91; a copy of this form (Figure 26) and a pencil must be carried in the vehicle at all times. A report shall be made for every accident, even if the driver of the other vehicle states that no claim will be filed for damages, or if the vehicles involved in the accident are solely Government-owned. It is the duty of the Navy driver to report all the facts to his supervisor, no matter how unfavorable they may be to the Navy. After filling out SF 91, the driver shall deliver the accident report personally or insure its immediate delivery to his supervisor who will forward the report to the accident investigator. FAILURE TO REPORT AN ACCIDENT WILL RESULT IN SEVERE DISCIPLINARY ACTION.

The Operator's Report of a Motor Vehicle Accident (Standard Form 91) is vital to the Government driver involved. The processing of the incident in regard to responsibility, claims, etc., cannot be accomplished until the investigator has all the necessary information, names, addresses, code numbers, dates, times, locations, etc. If "YOU ARE THE GOVERNMENT DRIVER INVOLVED," "YOU ARE THERE AT THE SCENE" when all the information is available. The effort of you and your supervisor to provide the necessary information "AT THE SCENE OF
THE ACCIDENT. "WHEN THIS INFORMATION IS AVAILABLE" could be very beneficial to you and the Government in determining responsibility and expediting the outcome of your accident.

10.2 POST-ACCIDENT INSTRUCTIONS. After an accident occurs, follow the procedures outlined below.

(1) Stop immediately; determine whether any personal injuries occurred and, if so, help the injured to secure prompt medical care. Call the local police.

(2) Do not give any statements or express an opinion regarding the accident without the approval of your supervisor or Commanding Officer.

(3) Prevent additional accidents by placing flares, flags, or stationing someone well back of the accident to warn oncoming vehicles; clear the roadway of any debris, especially glass and sharp metal. Most local regulations prohibit moving the vehicles before the police arrive if anyone is injured or total damage exceeds $100.

(4) Notify your supervisor or superior officer, preferably by telephone, so that an investigation can be made while all the witnesses and other evidence are readily available. Use the emergency numbers supplied by your supervisor and listed in Appendix A.

(5) Furnish to any person directly involved in the accidents a completed Accident Identification Card (see 10.4, below), an official identification card which provides the name of the driver of the Navy vehicle and the activity to which he is assigned.
10.3 COMPLETION OF STANDARD FORM 91. Standard Form 91 (Figure 26) contains spaces for appropriate information pertaining to the vehicles, persons injured, witnesses, description of the accident, and related information. Navy drivers should study the illustrated SF 91 so that the form can be filled in properly and efficiently in case of an accident. After completing the form, check it for completeness and accuracy. Imagine that you are the investigating officer trying to form a picture of the accident from reading your report; remember that his decision about responsibility for the accident will be based on the details you provide. In fairness to yourself, you must be sure that all your answers are clearly stated before you turn in the form. When you are satisfied that they are, sign the report and turn it in to your Commanding Officer, supervisor, or dispatcher.

10.4 OTHER ACCIDENT REPORTS. Any accident which occurs on public roads and involves an injury must be reported to the State in which it occurs; most States have similar requirements for property damage which exceeds a minimum established in their motor vehicle regulations. Reports to civil authorities must be completed and filed in accordance with existing regulations; the Navy driver should fill out the required forms in duplicate, if possible in the presence of his supervisor, and one copy shall be retained in the files of the supervisor or the Commanding Officer.

a. Federal Tort Claims Act. While driving a vehicle under instructions of an authorized representative of the U.S. Navy, the Navy driver becomes an agent-employee of the United States. Under the Federal Tort Claims Act, the Government
may be sued in the Federal Courts for damages to persons or property caused by an employee of the Government. If, as a result of an accident that occurred while you were driving a Navy vehicle on an authorized trip, you receive any subpoena, summons, complaint or other notice of legal action being brought against you, notify the Commanding Officer immediately, usually through your supervisor. If possible, the original of any papers or forms received in these actions shall be furnished to the Commanding Officer; if originals are not available, the copy should so be noted.

b. Defense Against Civil Suits. If it is established that, at the time of the accident, you were acting within the scope of your orders and authorization, the suit will be considered as against the United States, and the office of Attorney General of the United States will defend the Government and you in such legal actions. Under these conditions, you must cooperate fully with the legal officer representing the U.S. Attorney General in defense against the suit.

Detailed information is contained in JAG Instruction 5822.2 (and revisions).

(1) Do not agree to confer with claimants, their agents or attorneys; do not answer letters or complete forms received from them. Notify your supervisor of such mail so that the legal officer or Commanding Officer may reply if he so desires.

(2) Do not discuss the details of the accident with anyone except your supervisor, the legal officer, or other authorized Government representative.
(3) Always maintain a courteous manner; avoid arguments with other people involved in the accident.

10.5 USING DD FORM 518. The Accident Identification Card, DD 518, provides any person involved in an accident with a Navy vehicle with the name and organizational assignment of the Navy driver (Figure 27). Always fill out DD Form 518 at the scene of the accident, and give a copy to the driver or drivers of the other vehicles concerned. If the accident involves a parked car and there is no owner or operator available, place Form 518 in or on the parked vehicle. Notify the police immediately, and remain at the scene of the accident until the police arrive or the owner can be located.
The "OPERATORS REPORT OF A MOTOR-VEHICLE ACCIDENT REPORT (STANDARD FORM 91)" is vital to the Government driver involved. The processing of the incident in regard to responsibility, claims, etc., cannot be accomplished until the investigator has all the necessary information, names, addresses, code numbers, dates, times, locations, etc. If "YOU ARE THE GOVERNMENT DRIVER INVOLVED" "YOU ARE THERE AT THE SCENE" when all the information is available. The effort of you and your supervisor to provide the necessary information "AT THE SCENE OF THE ACCIDENT" "WHEN THIS INFORMATION IS AVAILABLE" could be very beneficial to you and the Government in determining responsibility and expediting the outcome of your accident.

EVERY BLOCK SHOULD BE FILLED IN
If a particular block does not apply, write N/A or write reason.

NUMBER NOTES FOR FORM SF-91
A. Code number, work phone.
B. Occupation (plumber, driver, operator), wage grade, rank or rate (WG-6, GS-4).
C. Has to be established from where to where, i.e., NAS Miramar to Naval Station, i.e., Head of Pier to USS Hardship (QX-123).
D. Minor-under $100, Moderate-$100 to $200, Major-over $200.
E. State and number.
F. Get any and all information for these sections-phone numbers, names, etc. They could be very important to your case. (Policeman should assist you.)
G. Much information here as possible.
H. Give all and any information that might be pertinent. Add extra papers if necessary. You cannot give too much information.
I. Must indicate north with arrow.
J. Street names, parking lot space number, pier number, building number, etc. Very important.
K. Action of vehicles-direction, lane, speed, etc.
L. Signature must be legible.
FIGURE 26
Operator's Report of a Motor Vehicle Accident,
Standard Form 91 (Side 1)
### Standard Form 91 (Side 2)

<table>
<thead>
<tr>
<th>Name</th>
<th>Supply Code</th>
<th>N/A</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown, Betty O.</td>
<td>123</td>
<td></td>
<td>(123-456-789)</td>
</tr>
<tr>
<td>Brown, Betty O.</td>
<td>123</td>
<td></td>
<td>(123-456-789)</td>
</tr>
</tbody>
</table>

**If Known:**

- Very important to get names, addresses, and phone numbers.

**Police Officer:**

- Anita Sanchez

**Vehicle:**

- Make: N/A
- Model: N/A
- Color: N/A
- Year: N/A
- Vin: N/A

**Condition of Vehicle:**

- Damage: N/A
- Color: N/A
- Type of Damage: N/A

**Other Information:**

- Use extra sheet if necessary.
b. "I was backing south into parking space 1330, misjudged my distance, and struck my left rear fender. The right side of the front fender in space 2445."

K

c. "I was driving north on Ward Road, stopped in the left lane for red traffic light at Robertson Street. My vehicle was struck in the right front fender by a red Cherokee."

L

Standard Form 91 (Side 4)
ACCIDENT-IDENTIFICATION CARD

Any correspondence regarding accident should be addressed to:
Commanding Officer
U.S. Naval Air Station
Anywhere, USA 12345

MAKE REFERENCE TO

DATE OF ACCIDENT
9 September 1966

MAKE AND TYPE OF VEHICLE
Sedan

REGISTRATION NO.
92-00000

DRIVER (Last name-first name-initial)
King, Thomas F.

SERVICE NO. GRADE
134896 YN2

ORGANIZATION
Fighter Squadron 0000-VF
U.S. Naval Air Station
Anywhere, USA 12345

FIGURE 27
Accident-Identification Card,
DD Form 518
APPENDIX A

EMERGENCY TELEPHONE NUMBERS

In case of accident, breakdown, or emergency involving a Navy vehicle on the road, notify the appropriate office listed below: (Instructions and telephone numbers will be furnished by your supervisor.)

<table>
<thead>
<tr>
<th>Office</th>
<th>Telephone Number</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMBULANCE</td>
<td>- Base</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Local</td>
<td></td>
</tr>
<tr>
<td>DISPATCHER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRE DEPT</td>
<td>- Base</td>
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<tr>
<td></td>
<td>- Local</td>
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<tr>
<td>GOD DESK</td>
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<tr>
<td>POLICE</td>
<td>- Base SP</td>
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<td>- Local</td>
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<tr>
<td></td>
<td>- State</td>
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</tr>
<tr>
<td>SHOP</td>
<td></td>
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</tr>
<tr>
<td>TOWING</td>
<td>- Base</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Local</td>
<td></td>
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</tbody>
</table>