

SECTION 18

MOTOR VEHICLES AND AIRCRAFT

18.A GENERAL

18.A.01 Every person operating a motor vehicle shall possess, at all times while operating such vehicle, a license/permit valid for the equipment being operated. The operator must present the license/permit to the GDA upon request. Failure to do so may result in the immediate shutdown of the vehicle involved and removal of the operator from the project.

18.A.02 Inspection, tests, maintenance, and repairs.

a. Inspections, tests, maintenance, and repairs shall be conducted by a qualified person and in accordance with the manufacturer's recommendations.

b. Before initial use, vehicles not otherwise inspected by State or local authorities, shall be inspected by a qualified mechanic and found in safe operating condition. The inspection shall be documented in writing and available for inspection on the work site. >This is a one-time inspection.

c. When dump trucks are brought onto a USACE job site, they shall be inspected and found in compliance with the requirements of this Section before they are placed in service. This inspection shall be documented on a checklist.

d. All vehicles shall be inspected on a scheduled maintenance program.

e. Prior to each use, but not more often than daily, vehicles shall be checked by the operator to assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use:

EM 385-1-1

3 Nov 03

- (1) Service brakes, including trailer brake connections;
- (2) Parking system (hand brake);
- (3) Emergency stopping system (brakes);
- (4) Tires;
- (5) Horns;
- (6) Steering mechanism;
- (7) Coupling devices;
- (8) Seat belts;
- (9) Operating controls;
- (10) Safety devices (e.g., backup alarms and lights, fire extinguishers, first-aid kits, etc.); and
- (11) Accessories including lights, reflectors, windshield wipers, and defrosters where such equipment is necessary.

f. Inspection, test, repair, and maintenance records shall be maintained at the site and shall be available on request to the GDA.

18.A.03 Vehicles not meeting safe operating conditions shall be immediately removed from service, its use prohibited until unsafe conditions have been corrected, and re-inspected before being placed in service again.

18.A.04 All vehicles or combination of vehicles operated between sunset and sunrise shall have the following lights:

- a. Two headlights, one on each side of the front;

- b. At least one red taillight and one red or amber stoplight on each side of the rear;
- c. Directional signal lights (both front and back); and
- d. Three emergency flares, reflective markers, or equivalent portable warning device.

18.A.05 Brake systems.

- a. All vehicles, except trailers having a gross weight of 5,000 lb (2267.9 kg) or less, shall be equipped with service brakes and manually-operated parking brakes.
- b. Service and parking brakes shall be adequate to control the movement of, to stop, and to hold the vehicle under all conditions of service.
- c. Service brakes on trailers and semi-trailers shall be controlled from the driver's seat of the prime mover.
- d. Braking systems on every combination of vehicles shall be so designed as to be in approximate synchronization on all wheels and develop the required braking effort on the rear-most wheels first. The design shall also provide for application of the brakes by the driver of the prime mover from the cab. Exceptions to this are vehicles in tow by an approved tow bar hitch.

18.A.06 Every motor vehicle shall have:

- a. An operable speedometer;
- b. An operable fuel gage;
- c. An operable audible warning device (horn) in operating condition;

EM 385-1-1

3 Nov 03

- d. A windshield equipped with an adequate windshield wiper;
- e. An operable defrosting and defogging device;
- f. An adequate rear view mirror or mirrors;
- g. Cabs, cab shields, and other protection to protect the driver from the elements and falling or shifting materials;
- h. Non-slip surfaces on steps; and
- i. A power-operated starting device.

18.A.07 Glass in windshields, windows, and doors shall be safety glass. Any cracked or broken glass shall be replaced.

18.A.08 Trailers.

- a. All towing devices used on any combinations of vehicles shall be structurally adequate for the weight drawn and shall be properly mounted.
- b. A locking device or double safety system shall be provided on every fifth wheel mechanism and tow bar arrangement to prevent the accidental separation of towed and towing vehicles.
- c. Every trailer shall be coupled with safety chains or cables to the towing vehicle. Such chain or cable shall prevent the separation of the vehicles in case of tow bar failure.
- d. Trailers equipped with power brakes shall be equipped with a breakaway device that effectively locks-up the brakes in the event the trailer separates from the towing vehicle.

18.A.09 Industrial and commercial vehicles shall meet the guarding and safety requirements of 16.B.

18.A.10 Dump trucks.

- a. All dump trucks shall be equipped with a holding device to prevent accidental lowering of the body while maintenance or inspection work is being done.
- b. All hoist levers shall be secured to prevent accidental starting or tripping of the mechanism.
- c. All off-highway end-dump trucks shall be equipped with a means (plainly visible from the operator's position while looking ahead) to determine whether the dump box is lowered.
- d. Trip handles for tailgates on all dump trucks shall be arranged to keep the operator in the clear.

18.A.11 All buses, trucks, and combinations of vehicles with a carrying capacity of 1.5 tons (1,360.8 kg) or over, when operated on public highways, shall be equipped with emergency equipment required by State laws but not less than:

- a. One red flag not less than 12 square inches (in²) (77.4 square centimeter (cm²)) with standard and three reflective markers that shall be available for immediate use in case of emergency stops.
- b. Two wheel chocks for each vehicle or each unit of a combination of vehicles.
- c. At least one 2A:10B:C fire extinguisher (at least two properly rated fire extinguishers are required for flammable cargoes).

18.A.12 Vehicle exhaust shall be controlled so that it will not present a hazard to the operator, attendants, or other personnel.

18.A.13 A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires

EM 385-1-1

3 Nov 03

installed on split rims, or rims equipped with locking rings or similar devices.

18.A.14 All rubber-tired motor vehicles shall be equipped with fenders, and tires shall not extend beyond fenders. Mud flaps may be used in lieu of fenders whenever motor vehicle equipment is not designed for fenders.

18.B OPERATING RULES

18.B.01

a. Operators of USACE motor vehicles/equipment or USACE employees using their vehicles on official business, either on or off USACE projects, and operators of Contractor motor vehicles/equipment being used on USACE projects may only use cellular telephones with hands-free devices while the vehicle is in motion. Prior to using a hand-held cellular phone, drivers shall find a safe place to bring their vehicle to a stop. This requirement does NOT preclude passenger(s) from using cellular phones while the vehicle is in motion. The use of headphones and earphones is prohibited while operating a motor vehicle/equipment.

b. Operators of USACE motor vehicles shall not eat, drink, or smoke while the vehicle is in motion. >See AR 385-55.

18.B.02 The principles of defensive driving shall be practiced. Operators of Army motor vehicles shall receive Defensive Driving Training every 4 years.

18.B.03 Seat belts shall be installed and worn per 16.B.08. Buses are exempt from this requirement.

18.B.04 At all times, the operator must have the vehicle under control and be able to bring it to a complete stop within a safe stopping distance.

18.B.05 Vehicles may not be driven at speeds greater than the posted speed limit, with due regard for weather, traffic, intersections, width and character of the roadway, type of motor vehicle, and any other existing condition.

18.B.06 Headlights shall be switched to low beam when approaching other vehicles.

18.B.07 Headlights shall be lighted from sunset to sunrise, during fog, smoke, rain, or other unfavorable atmospheric conditions, and at any other time when there is not sufficient light for the vehicle to be seen or the operator to see on the highway at a distance of 500 ft (150.4 m).

18.B.08 Vehicles shall not be driven on a downgrade with gears in neutral or clutch disengaged.

18.B.09 Railroad crossings and drawbridges.

a. Upon approaching a railroad crossing or drawbridge, vehicles shall be driven at such a speed as to permit stopping before reaching the nearest track or the edge of the draw and shall proceed only if the course is clear.

b. Vehicles transporting 15 or more persons, explosives, or flammable or toxic substances shall stop at railroad crossings and drawbridges and shall not proceed until the course is clear, except at a railroad crossing or drawbridge protected by a traffic officer or a traffic signal giving a positive indication for approaching vehicles to proceed.

18.B.10 Vehicles shall not be stopped, parked, or left standing on any road, or adjacent thereto, or in any area in a manner as to endanger the vehicle, other vehicles, equipment, or personnel using or passing that road or area.

18.B.11 Vehicles shall not be left unattended until the motor has been shut off, the key removed (unless local regulations prohibit), parking brake set, and gear engaged in low, reverse, or park. If

EM 385-1-1

3 Nov 03

stopped on a hill or grade, front wheels shall be turned or hooked into the curb or the wheels securely chocked.

18.B.12 Vehicles carrying loads that project beyond the sides or rear of the vehicle shall carry a red flag, not less than 144 in² (900 cm²), at or near the end of the projection. At night or when atmospheric conditions restrict visibility, a warning light shall be used in lieu of the red flag. Drivers will assure the load does not obscure vehicle lights and/or reflectors.

18.B.13 Employees shall not be permitted to get between a towed and towing vehicle except when hooking or unhooking.

18.B.14 No vehicle or combination of vehicles hauling unusually heavy loads or equipment shall be moved until the driver has been provided with the required permits, the correct weights of the vehicles and load, and a designated route to be followed.

18.B.15 When backing or maneuvering, operators will take the applicable precautions outlined in 08.B.04. If a signal person or spotter is not used, operators will walk behind their vehicle to view the area for possible hazards before backing their vehicle.

18.B.16 When a bus, truck, or truck-trailer combination is disabled or parked on a highway or the adjacent shoulder, red flags shall be displayed during the daytime and reflector, flares, or electric lights shall be displayed at night.

18.B.17 Loading vehicles.

a. Drivers of trucks and similar vehicles shall leave the cab while the vehicle is being loaded when they are exposed to danger from suspended loads or overhead loading equipment, unless the cab is adequately protected.

b. Vehicles shall not be loaded in a manner that obscures the driver's view ahead or to either side or which interferes with the safe operation of the vehicle.

c. The load on every vehicle shall be distributed, chocked, tied down, or secured. Loads shall be covered when there is a hazard of flying/falling dirt, rock, debris, or material. End gates shall not be removed without implementing a positive means to prevent material from falling out of the back of the vehicle and may be done only with the acceptance of the GDA.

18.C TRANSPORTATION OF PERSONNEL

18.C.01 The number of passengers in passenger-type vehicles shall not exceed the number that can be seated.

18.C.02 Trucks used to transport personnel shall be equipped with a securely anchored seating arrangement, a rear end gate, and guardrail. Steps or ladders, for mounting and dismounting, shall be provided.

18.C.03 All tools and equipment shall be guarded, stowed, and secured when transported with personnel.

18.C.04 No person will be permitted to ride with arms or legs outside of a vehicle body; in a standing position on the body; on running boards; seated on side fenders, cabs, cab shields, rear of the truck, or on the load.

18.C.05 All vehicles transporting personnel during cold or inclement weather shall be enclosed. Passengers shall be protected from inclement weather elements.

18.C.06 Explosives, flammable materials (excepting normal fuel supply), or toxic substances may not be transported in vehicles carrying personnel.

18.C.07 Vehicles transporting personnel shall not be moved until the driver has ascertained that all persons are seated and the guardrails and rear end gates are in place or doors closed.

18.C.08 Getting on or off any vehicle while it is in motion is prohibited.

EM 385-1-1

3 Nov 03

18.C.09 All motor vehicles shall be shut down prior to and during fueling operations. > **See 16.A.15.**

18.D ALL TERRAIN VEHICLES (ATV)

18.D.01 Every ATV operator shall have completed a nationally-recognized accredited ATV training course (such as provided by the Specialty Vehicles Institute of America or in-house resources that have been certified as trainers by an accredited organization) prior to operation of the vehicle. The operator must pass an operating skills test prior to being allowed to operate an ATV. Proof of completion of this training shall be made available to the GDA upon request.

18.D.02 The manufacturer's recommended payload shall not be exceeded at any time.

18.D.03 Gloves and an approved motorcycle helmet with full-face shield or goggles shall be worn at all times while operating a Class I ATV.

18.D.04 ATVs shall be used only off-road (no paved road use unless allowed by the manufacturer).

18.D.05 ATVs shall be driven during daylight hours (unless properly equipped with lights for night use).

18.D.06 Only ATVs with four or more wheels may be used.

18.D.07 Passengers are prohibited on Class I ATVs.

18.D.08 All ATVs shall be equipped with a warning signal device (horn), tail lights, and stop lights.

18.D.09 A copy of the operators manual will be kept on the vehicle and protected from the elements (if practicable).

18.D.10 Tires shall be inflated to the pressures recommended by the manufacturer.

18.D.11 ATVs will be equipped with mufflers.

18.D.12 All ATVs shall be equipped with spark arresters.

18.D.13 All Class II ATVs shall be equipped with ROPS.

18.E AIRCRAFT

18.E.01 All non-military aircraft shall be registered, certified in the appropriate category, and maintained in accordance with the airworthiness standards of the FAA. (If used OCONUS, and not prohibited by other regulation such as ER 95-1-1, registration, certification, and maintenance in accordance with the standards of a comparable governing body of foreign or international authority may be substituted for those of the FAA.)

18.E.02 All contract pilots or pilots of chartered aircraft shall hold at least a commercial pilot certificate with instrument rating. All pilots of non-military aircraft shall possess ratings to comply with the FAA Regulation governing the aircraft and operations involved.

18.E.03 All non-military aircraft shall be equipped with a two-way radio.

18.E.04 All non-military flight operations shall be in accordance with the FAA rules governing conduct for the specific operation. (Examples are 14 CFR 133 (Federal Aviation Regulation 133); 14 CFR 135 (Federal Aviation Regulation 135); and 14 CFR 91 (Federal Aviation Regulation 91).

18.E.05 All military flight operations shall be conducted under appropriate DOT/DOD regulations, such as the AR 95 Series.

