

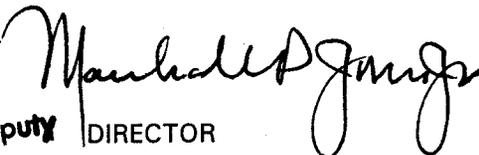


U.S. FISH AND WILDLIFE SERVICE TRANSMITTAL SHEET

PART 243 FW 1-5	SUBJECT Motor Vehicle and Motor Equipment Safety Safe Operation of Motor Vehicles and Motor Equipment Special Purpose Trucks Heavy-Duty Motor Equipment Powered Industrial Trucks Towing, Cargo Carrying, and Load Securement	RELEASE NUMBER 444
FOR FURTHER INFORMATION CONTACT Division of Safety and Health		DATE April 1, 2004

EXPLANATION OF MATERIAL TRANSMITTED:

The chapters in Part 243 establish Fish and Wildlife Service policies for the safe operation of motorized vehicles and motor equipment. 243 FW 1 provides authorities and definitions, assigns responsibilities, and outlines general requirements for the safe operation of motor vehicles and motor equipment. 243 FW 2 establishes safety requirements for fish distribution, fire, and dump trucks. 243 FW 3 outlines safety requirements for heavy-duty motor equipment. 243 FW 4 provides requirements for the safe operation of powered industrial trucks. 243 FW 5 provides safety requirements for towing, carrying cargo, and load securement.


Deputy DIRECTOR

FILING INSTRUCTIONS:

Remove:

241 FW 2, 09/22/95, FWM 215
Exhibit 1, 241 FW 2, 09/22/95, FWM 215

Insert:

243 FW 1, 04/01/04, FWM 444
243 FW 2, 04/01/04, FWM 444
243 FW 3, 04/01/04, FWM 444
243 FW 4, 04/01/04, FWM 444
243 FW 5, 04/01/04, FWM 444

FISH AND WILDLIFE SERVICE
OCCUPATIONAL SAFETY AND HEALTH

Occupational Safety and Health

Part 243 Motor Vehicle and Motor Equipment Safety

Chapter 3 Heavy-Duty Motor Equipment

243 FW 3

3.1 What is the purpose of this chapter? This chapter specifies safety requirements associated with heavy duty motor equipment. Use this chapter in concert with the other chapters in Part 243.

3.2 Can heavy equipment be operated at any time? We restrict night operation of heavy equipment to fires or similar emergencies.

3.3 Are reverse signal devices needed? Motor equipment must be equipped with a reverse signal device if there is an obstructed view of the rear and there is not a designated observer available to signal the operator when it is safe to move the equipment to the rear. The reverse signal device must be audible and sufficiently distinct to be heard over prevailing conditions. The device must be operational automatically upon commencement of backward motion, be continuous or intermittent (not to exceed 3 second intervals), and be operational during the entire backward movement.

3.4 When are guards necessary? Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment will have guards if such parts are exposed to contact by any person or would otherwise create a hazard. All hot surfaces of equipment, including exhaust pipes or other lines, will be guarded or insulated to prevent injury and fire. Exhausts or discharges from equipment should be directed so that it does not endanger any person or obstruct the operator's view. Platforms, footwalks, steps, handholds, guardrails, and toe boards will be provided on machinery and equipment to provide safe footing and accessways. Guards and safety appliances or devices will not be removed from machinery, equipment, or made ineffective except for the purpose of making immediate repairs, lubrications, or adjustments, and then only after the power has been shut off. See 241 FW 8. All guards and devices will be replaced immediately after completion of repair and adjustments, and before power is turned on.

3.5 Does land clearing equipment have specific requirements? To protect the operator from falling and/or being hit by flying objects, all bulldozers or similar equipment used in clearing operations will be provided with guards, shields, canopies, and grills appropriate to the nature of the operations. The overhead cover on this canopy structure will be not less than 1/8-inch steel plate, or 1/4-inch woven wire mesh with openings no greater than 1 inch or equivalent. The opening in the rear of the canopy structure will be covered with not less than 1/4-inch woven wire mesh with openings no greater than 1 inch.

3.6 What about crawlers? Crawlers with cable winches must have screen protection that meets industry standards

for rear screen barrier protection in order to protect the operator in case the cable breaks.

3.7 Are rollover protective structures (ROPS) and seatbelts required?

A. ROPS and seat belts must be installed on:

(1) Crawler and rubber-tired tractors, such as dozers, push and pull tractors, winch tractors, mowers, and water tank trucks having a tank height less than the cab.

(2) Off-the-highway self-propelled pneumatic-tired earth movers such as trucks, pans, scrapers, bottom dumps, end dumps, and motor graders.

(3) Self-propelled construction equipment such as front-end loaders, backhoes, and rollers.

B. Inspect seat belts annually and replace if defects, flaws, or excessive wear is observed. Replacements of seat belts must be in accordance with the manufacturer's recommendations provided in the equipment's operator and/or service manual.

3.8 When are ROPS not required? A ROPS is not required on:

A. Crane-mounted draglines, rollers, and compactors of the tandem steel-wheeled and self-propelled pneumatic-tired type.

B. Self-propelled rubber-tired lawn and garden tractors under 20 drawbar horsepower.

C. Steel rollers used exclusively for asphalt, bituminous surface work, and preparation of paving sub-base materials.

D. Cranes, draglines, or equipment on which the operator's cab and boom rotate as a unit.

3.9 Are there requirements for ROPS? Each ROPS must have:

A. Manufacturer's or fabricator's name and address.

B. ROPS model number, if any.

C. Machine make, model, or series number for which the structure was designed.

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D. Certification which meets the American Welding Society Standards D2.0, Part II, or equivalent.

E. Two-piece seat belts and anchorages.

3.10 When are slow-moving vehicle emblems necessary?

A. Slow-moving-vehicle emblems will be mounted on wheeled tractors and all other units that travel public roadways at speeds of 25 miles per hour or less. The slow-moving-vehicle emblem must be mounted in accordance with 29 CFR 1910.145.

B. A slow-moving-vehicle emblem and corner reflectors will be affixed to towed utility carts and wagons that are large enough to block a clear view of the tractor. Any tractor towing such devices is required to have rear view mirrors.

3.11 When is protective equipment necessary?

Service-owned or leased bush hog and flail-type mowers will be drawn only by tractors with protective equipment designed to prevent propelled objects from striking the operator.

A. Tractors will be equipped with a totally enclosed cab with rear windows in the closed position; or

B. For tractors without an enclosed cab, a rear barrier consisting of a minimum of ¼-inch thick sheet of transparent, impact resistant polycarbonate plastic will be provided. For tractors involved in site clearing, a woven or welded wire screen with ¼-inch wire diameter and openings no larger than 1 inch is required in addition to the polycarbonate barrier that is either clamped or strapped to the ROPS. Bolting or welding this rear barrier to the ROPS can void the certification of the ROPS. The overhead cover will be of not less than 1/8-inch steel plate, or ¼-inch woven wire mesh with openings not greater than 1 inch, or equivalent. Provisions will be made for removing or moving the plastic sheet to facilitate cleaning, when necessary.

C. All cab glass must be safety glass.

D. Operators of side cutter mowers will be provided equivalent protection through the use of side shields or similar protective systems.

3.12 What personal protective equipment (PPE) is required?

A. When operating crawler tractors with open cabs, dust masks approved by the National Institute of Occupational

Safety and Health and eye protection must be worn. If excessive noise exposure is suspected by the operator or confirmed by sound level meter or dosimeter readings, hearing protection must be worn per 242 FW 3. In air-conditioned, positive-pressure enclosed cabs, the need for dust masks and eye protection is waived.

B. High visibility vests and/or hardhats must be worn when required or in accordance with 241 FW 3.

3.13 If a spotter is used, what precautions are necessary? Spotters must maintain a direct line-of-sight or possess a means of communication with the equipment operator. They must wear the correct personal protective equipment outlined in 241 FW 3, including a high visibility vest.

3.14 What other safety requirements are associated with heavy-duty equipment?

A. Ample clearance must be provided for personnel between any solid material and the tail swing of a dragline, shovel, or crane. Barriers, barricades, signs of hazard tape preventing access to pinch point (e.g., space between machine and object/dirt mound, etc.) must be used whenever feasible.

B. Service equipment with parts or accessories lowered by gravity or hydraulic levers, such as shovels, buckets, dump beds, and bulldozer blades, will have such parts or accessories resting on the ground and/or bed frames, and the controls in gear when equipment is shut down, unless the manufacturer's instructions state otherwise or the equipment is sufficiently locked out to prevent it from falling if there is a failure. The brakes should be secured and the wheels blocked if the equipment is on an incline.

C. Any improvement of tractor stability by wide mounting of the wheels, the addition of wheel weights, or the addition of dual rear wheels must be done in accordance with the manufacturer's specifications.

D. The equipment instructor must have a "buddy" seat while conducting operator training. Riding on drawbars, fenders, or towed equipment is prohibited unless a seat is provided for such purpose.

E. Draw bars are to be hitched at least 13 inches but less than 17 inches off the ground. Operators must recognize that the higher a load is hitched, the easier it is for the tractor to overturn backwards.

3.15 What are the training requirements for heavy equipment operators? At a minimum, training will comply with 321 FW 1.