



Designation: F1517 – 14

Standard Guide for Scope of Performance of Emergency Medical Services Ambulance Operators¹

This standard is issued under the fixed designation F1517; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide covers minimum standards for the performance of emergency medical services (EMS) ambulance operators, including: operator qualifications, pre-run operation, and post-run aspects.

1.2 This guide shall promote the safe and efficient delivery of the ambulance, equipment, crew, passengers and patients, during all phases of the delivery of EMS involving the ambulance; at all times exercising the highest degree of care for the safety of the public. This guide may be applied to other EMS vehicles that do not necessarily provide patient transport.

1.3 This guide shall be used as the basis for training guides of the emergency medical services ambulance operator.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F1177 Terminology Relating to Emergency Medical Services

F1258 Practice for Emergency Medical Dispatch

3. Terminology

3.1 *Definitions:*

¹ This guide is under the jurisdiction of ASTM Committee F30 on Emergency Medical Services and is the direct responsibility of Subcommittee F30.02 on Personnel, Training and Education.

Current edition approved June 1, 2014. Published July 2014. Originally approved in 1994. Last previous edition approved in 2007 as F1517 – 94 (2007). DOI: 10.1520/F1517-14.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.1.1 The definitions given in Terminology F1177 are applicable to this guide.

3.1.2 *ambulance, n*—See Terminology F1177.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *ambulance operations, n*—the efficient delivery of the ambulance, equipment, crew, passengers and patients, during all phases of the delivery of EMS involving the ambulance at all times exercising the highest degree of care for the safety of the public.

3.2.2 *ambulance service provider, n*—as outlined in this guide, a person, company, corporation or political entity responsible for operation, maintenance, or policy making, or combination thereof, regarding emergency medical vehicle operations.

3.2.3 *bona fide occupational qualification (BFOQ), n*—the skills and knowledge relevant to the performance of a specific task.

3.2.4 *departure check, n*—the visual check of the vehicle and surrounding area ensuring that equipment and supplies have been retrieved and properly stored and that all compartment doors are secured.

3.2.5 *emergency mode, n*—as defined by individual state statutes that refer to emergency vehicles, equipment, and operations.

3.2.6 *full check, n*—a comprehensive and systematic evaluation of the ambulance at specified intervals, including documentation of the inspection, any deficiencies found and corrective actions.

3.2.7 *operator, n*—a person who operates or assists with the operation of an ambulance.

3.2.8 *post-run, n*—the managed return of the ambulance and operators to optimal pre-run readiness.

3.2.9 *pre-run, n*—all aspects of assuring response readiness.

3.2.10 *quick check, n*—an abbreviated version of the full check, focusing on the major operational functions of the vehicle.

4. Significance and Use

4.1 This guide provides minimum guidelines for safe and efficient ambulance operation.

4.2 All ambulance operations and operators should follow this guide for the development of educational and training programs.

4.3 This guide is intended to promote safe and efficient ambulance operations and to reduce morbidity, mortality, and property loss associated with ambulance operations.

4.4 This guide is intended to assist those who are responsible for the development and implementation of policies and procedures for ambulance operations.

5. Medical Fitness to Drive

5.1 Because of the complex relationship of certain medical and mental impairments, a medical screening program shall be established by all EMS entities bestowing the privilege of ambulance driving.

5.2 The authorization of ambulance drivers shall always be based on bona fide occupational qualifications (BFOQ) pursuant to the task of ambulance operation. The following shall be evaluated:

5.2.1 A medical exam of the applicant by a licensed M.D. or D.O. attesting that the history and physical reveals no evidence of any medical or physical condition which would prove detrimental to operating an ambulance,

5.2.2 Eye exam by a licensed ophthalmologist/optometrist to include:

- 5.2.2.1 Visual acuity;
- 5.2.2.2 Depth perception;
- 5.2.2.3 Peripheral vision;
- 5.2.2.4 Night blindness;
- 5.2.2.5 Color blindness; and
- 5.2.2.6 Amblyopia.

5.2.3 An examination of the medical history of the individual, designed to identify drivers who may be impaired by:

- 5.2.3.1 Loss of consciousness;
- 5.2.3.2 Cardiovascular disease;
- 5.2.3.3 Neurological/neurovascular disorder;
- 5.2.3.4 Mental illness;
- 5.2.3.5 Substance abuse/dependency;
- 5.2.3.6 Insulin-dependent diabetes; and
- 5.2.3.7 Rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease that interferes with the ability to control and operate a motor vehicle safely.

5.2.4 The presence of a medical condition by itself may not constitute an impaired operator, but shall identify an area for consideration by the physician in making a determination of the medical fitness to operating an ambulance.

6. Qualifications to Drive

6.1 Authorization shall be based upon cognitive evaluation of the operator regarding laws, guidelines, and policies relating to ambulance operation during emergency and non-emergency modes.

6.1.1 The provider shall have a policy that addresses operator fatigue.

6.2 An ambulance driving evaluation by the provider covering warning device operation, passing, intersection approach

precautions, turning, backing, and parking techniques during emergency and non-emergency modes.

6.3 A review of the state motor vehicle record for the previous three years with specific attention to traffic convictions concerning:

- 6.3.1 Speed;
- 6.3.2 Careless and imprudent driving;
- 6.3.3 Driving under the influence of alcohol or other mind-altering substances; and
- 6.3.4 Moving violations.

6.4 A review of motor vehicle accidents for the previous five years.

6.5 The operator shall possess a valid motor vehicle operator’s license, and any other certification required by state or local laws or regulations.

7. Pre-Run

7.1 The operator shall have knowledge of and shall comply with all applicable federal and state statutes, local ordinances, and regulations.

7.2 The operator shall have knowledge of the provider’s policies and procedures.

7.3 The operator shall have knowledge of roads, highways, and the locations of and accesses to major public facilities within the service area.

7.4 The provider shall have a process by which the operator is made aware of conditions that may affect traffic flow within the service area such as ice, snow, and rain.

7.5 The provider shall have a process by which the operator is made aware of present or forecasted environmental conditions (ice, snow, rain, and so forth) affecting traffic within the service area.

7.6 Upon unit availability, the operator shall visually inspect the ambulance, and document the inspection in accordance with one of the schedules shown in **Table 1**. The vehicle shall be inspected for the following:

- 7.6.1 Apparent body or glass damage;
- 7.6.2 Proper function of emergency lights;
 - 7.6.2.1 Beacons or strobe;
 - 7.6.2.2 Light bar;
 - 7.6.2.3 Tunnel lights/flashers; and
 - 7.6.2.4 Other warning lights.
- 7.6.3 Vehicle operating lights;
 - 7.6.3.1 Headlights (high/low);
 - 7.6.3.2 Emergency flashers;
 - 7.6.3.3 Parking/running lights;
 - 7.6.3.4 Interior and exterior turn signal;

TABLE 1 Emergency Medical Services Ambulance Maintenance Guidelines for Checklist Completion

Runs per Week	Full Check, h	Quick Check, h
0 to 1	every 96	every 24
2 to 3	every 72	every 24
4 to 7	every 48	every 24
8 to 50	every 24	every 12
50 +	every 24	every 8