

CR 86-29

CERTIFICATE

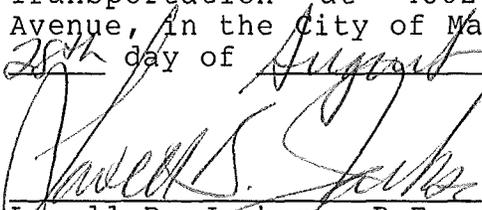
STATE OF WISCONSIN)
) s.s.
WISCONSIN DEPARTMENT OF TRANSPORTATION)

TO ALL WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Lowell B. Jackson, Secretary of the Wisconsin Department of Transportation and custodian of the official records do hereby that the rule relating to Ambulance Inspection and Ambulance Equipment Standards was duly approved and adopted by this department on August 28, 1986.

I further certify that this copy has been compared by me with the original on file in this department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have here-
unto set my hand and affixed the
official seal of the Department of
Transportation at 4802 Sheboygan
Avenue, in the City of Madison, this
28th day of August, 1986.



Lowell B. Jackson, P.E.
Secretary



RECEIVED

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Bureau

OFFICE OF THE SECRETARY

IN THE MATTER OF THE ADOPTION	*	
OF A RULE TO REPEAL CHAPTER	*	
TRANS 157, WISCONSIN ADMINIS-	*	
TRATIVE CODE, AND TO CREATE	*	ORDER
CHAPTER TRANS 309, WISCONSIN	*	ADOPTING
ADMINISTRATIVE CODE, RELATING TO	*	RULE
AMBULANCE INSPECTION AND	*	
AMBULANCE EQUIPMENT STANDARDS.	*	

Analysis Prepared by the Wisconsin Department of Transportation

Authority for the rule. The Wisconsin Legislature created sec. 341.085, Stats., which directs the Department of Transportation to adopt rules prescribing ambulance service equipment and standards. This statute became effective on July 1, 1977 and transferred responsibility for setting ambulance specifications, medical equipment, supplies and sanitation standards from the Department of Health and Social Services to the Department of Transportation (hereinafter Department). The Department inspects ambulances to insure compliance with applicable standards prior to registering such vehicles. Under sec. 85.16(1) and sec. 227.11(2), Stats., the Department has general authority to adopt rules to interpret and implement the duties imposed by sec. 341.085, Stats. The Department's first rule under 341.085, Stats. became effective on January 1, 1980. After more than five years of administering an ambulance inspection program under this rule, the Department has determined that certain clarifications, modifications and changes in the standards are desirable. The rule chapter will also be renumbered to place it with other rules of the Department relating to safety and vehicle equipment standards. The Department of Health and Social Services administers related statutes concerning the licensing of ambulance service providers (sec. 145.50, Stats.) and the training and certification of ambulance attendants. (Sections 146.50 and 146.35, Stats.).

Summary of the Rule. The rule is divided into three subchapters. The first subchapter contains general provisions. The definition of "ambulance" is changed to make it consistent with definitions contained in the motor vehicle code. Two new definitions of EMT intermediate and paramedic are added to reflect new certifications of personnel with advanced medical training made by the Department of Health and Social Services. Ambulances staffed by persons with these certifications will be required to have additional medical equipment appropriate to the level of training. When an ambulance is removed from service permanently, the rule clarifies that all medical equipment and supplies must be removed.

The second subchapter sets forth vehicle specifications. The specifications for vehicle doors are clarified to indicate that the door openings must provide clearance to allow removal of a patient strapped to a long spine board. The requirement that rear doors open to the side of the vehicle is removed to allow greater flexibility of design. Some vehicles are now manufactured with doors that swing up. The specifications for warning lights are changed to reflect the fact that federal regulations no longer require red rotating dome lights but now require corner mounted lamps with the option of a light bar on the front of the vehicle. No ambulance in service on the effective date of the rule will need to change its existing warning lamps to comply with the requirements of the rule. The specification for siren and public address systems is simplified to reflect the fact that the Department is not in a position to test for technical aspects of a system and that those currently available in the marketplace are adequate. The specification for communications equipment clarifies that a "walkie-talkie" or hand held system is not permitted for contact between the vehicle and the hospital it serves. Portable equipment shall be provided for communication with paramedics when they are outside the vehicle.

Subchapter three sets forth the standards for medical equipment which an ambulance must carry. The rule is broadened to allow the use of any commercially available elevating wheeled cot, non-elevating bench seat and chair stretcher; the specification for suction aspirator systems are changed to conform to federal regulations and the length of necessary suction tubing is reduced; the specifications for oxygen equipment are changed to require that the tanks be painted green and that flowmeters be eliminated at the cylinder; the requirement of a plug-in humidifier is eliminated to encourage the use of disposable humidifiers; infant oxygen masks are no longer required since this size is hard to obtain and nasal canulas can be substituted; testing of the oxygen flowmeters is eliminated since the test has proven to be inaccurate; specifications for extrication equipment are clarified to require that three flares or reflectors be carried; the specifications for medical equipment require oral and nasopharyngeal airways, permit more flexibility in size of bandages carried, eliminates the necessity of "sterile" burn sheets, requires an oversize blood pressure cuff, requires an aluminized rescue blanket, permits any type of commercial traction splint, permits the use of disposable laryngoscopes, requires sterile disposable examination gloves, requires examination masks, requires that liquid glucose be carried for treatment of diabetic shock and requires additional medical equipment and supplies in ambulances staffed with EMT intermediates and paramedics.

Fiscal effect. It is not anticipated that the changes in this rulemaking order will have any state fiscal effect either during the current biennium or on an annualized basis. This conclusion is based on the assumption that the rule changes will not significantly affect the staff time expended in making ambulance inspections nor require any increase in staff assigned to the ambulance inspection program.

It is also not anticipated that the change will have any effect on the fiscal liability or revenues of any county, city, village, town, school district, vocational, technical and adult education district or sewerage district. This conclusion is based on the assumption that those municipalities providing ambulances staffed with personnel trained as EMT intermediates and paramedics already provide the specialized medical equipment identified in the rule for such ambulances. Any expenditures required to comply with the new rule are expected to be de minimus.

This analysis was prepared by Barbara F. Bird, Office of General Counsel, Wisconsin Department of Transportation, (608)266-8810.

Pursuant to authority vested in the Wisconsin department of transportation by ss. 85.16(1), 227.014(2) and 341.085, Wis. Stats., the department of transportation hereby repeals chapter Trans 157 and creates chapter Trans 309, Wis. Admin. Code, interpreting and implementing s. 341.085, Stats., as follows:

TEXT OF RULE

SECTION 1. Chapter Trans 157, Wis. Admin. Code, is repealed.

SECTION 2. Chapter Trans 309, Wis. Admin. Code, is created to read:

CHAPTER TRANS 309

AMBULANCE INSPECTION

SUBCHAPTER I GENERAL PROVISIONS

Trans 309.01 PURPOSE AND SCOPE; CONSTRUCTION. (1) The purpose of this chapter is to prescribe minimum vehicle and

medical equipment specifications for ambulances and to establish administrative procedures for implementing the ambulance inspection program under s. 341.085, Stats.

(2) This chapter applies to all ambulances in service in this state after December 30, 1979.

(3)(a) This chapter shall be construed liberally to effectuate the legislative purpose of promoting safe, efficient emergency transportation for the sick, injured and disabled.

(b) Vehicles subject to the standards and specifications prescribed in this chapter are also subject to any other administrative rule or statute governing motor vehicle design, construction or equipment. Unless the express terms or context requires otherwise, this chapter shall be construed as supplementing rather than conflicting with other such statutes or administrative rules.

(c) This chapter prescribes minimum standards applicable to all ambulances subject to inspection under s. 341.085, Stats. Ambulance service providers may exceed these minimum standards. Also, some ambulances may be subject to higher or more restrictive standards imposed as conditions for receiving federal assistance in connection with the acquisition of ambulance vehicles and equipment. Ambulance service providers are responsible for complying with all conditions and requirements, including those related to color and marking, contained in federal assistance grants or agreements.

Trans 309.02 DEFINITIONS. As used in this chapter:

(1) "Ambulance" means any authorized emergency motor vehicle as defined in s. 340.01(3), Stats., whether privately or publicly owned, which is designed, constructed or equipped to transport patients.

(2) "Ambulance attendant" has the meaning given in s. 146.50(1)(b), Stats.

(3) "Ambulance service provider" has the meaning given in s. 146.50(1)(c), Stats.

(4) "Coordinating physician" has the meaning given in s. H 21.02 (4).

(5) "Department" means the department of transportation.

(6) "EMT intermediate" means an emergency medical technician (EMT)-intermediate as defined in s. HSS 111.04(3).

(7) "Inspector" means any officer or employe of the department who is authorized and assigned to conduct ambulance inspections under this chapter.

(8) "Medical director" has the meaning given in s. HSS 111.04 (8).

(9) "Paramedic" means an emergency medical technician-advanced (paramedic) as defined in s. 146.35(1), Stats.

(10) "Person" means any individual, corporation, partnership, association, the state and political subdivisions thereof and any municipal corporation.

(11) "Star of Life" means the registered symbol of the United States Department of Transportation and the National Highway Traffic Safety Administration consisting of a six-barred blue cross upon which is superimposed in white the Staff of Aesculapius, who in both Greek and Roman mythology was the god of medicine and healing, which when displayed on an ambulance indicates that the vehicle meets federal specification KKK-A-1822 in effect on the date the ambulance was manufactured.

(12) "Type I ambulance" means a motor truck with a modular unit having a rear window opening into the modular unit.

(13) "Type II ambulance" means a van type vehicle constructed or converted with a raised roof.

(14) "Type III ambulance" means a specialty van and modular unit with a walk-through from the cab to the modular unit.

Trans 309.03 ANNUAL INSPECTIONS. (1) No person may use any motor vehicle for the purpose of providing ambulance services unless the vehicle has been inspected and approved annually by the department for use as an ambulance in this state. Except as otherwise provided, each ambulance so inspected shall meet the minimum standards applicable to that vehicle under subchs. II and III.

(2) The ambulance service provider shall present the vehicle for inspection when notified by the department and shall cooperate with the inspector. Whenever possible, the department shall perform the inspection at the ambulance service provider's place

of business or other site convenient to the ambulance service provider's base of operation. The inspector shall conduct the inspection in a manner that will not interfere with the provision of ambulance service.

(3)(a) Except as provided in sub. (4) if upon inspection a vehicle is found to be unsafe or improperly constructed or equipped for use as an ambulance, the inspector shall attach an "OUT OF SERVICE" sticker to the glass in the rear door of the vehicle. A vehicle may not be put in service as an ambulance while the sticker is so displayed. Except as provided in par. (b), the "OUT OF SERVICE" sticker shall not be removed until the deficiencies noted on the inspection report have been corrected and the vehicle has been reinspected and approved by the department.

(b) 1. If a vehicle that has been declared "out of service" is no longer to serve as an ambulance, the owner or lessee of the vehicle shall remove the "OUT OF SERVICE" sticker and all special ambulance markings and features from the vehicle, including:

a. The warning, flood lights and siren unless the vehicle is being converted for use as another kind of authorized emergency vehicle;

b. The "STAR OF LIFE" symbol, if displayed;

c. Any lettering identifying the vehicle as an ambulance; and

d. All equipment required in subchapter III.

2. The owner or lessee of the vehicle is not required to obtain approval from the department or to notify the department when he or she proceeds under this paragraph.

(4) If upon inspection a vehicle is found defective or deficient but, in the judgment of the inspector, may nevertheless be operated as an ambulance without seriously affecting the safe transportation of sick, injured or disabled persons, the inspector shall note the deficiency on the ambulance inspection report and shall specify the time, not to exceed 30 days, in which the ambulance service provider is required to correct the defect or deficiency. If the defect or deficiency is not corrected within the time allowed, the vehicle shall not be used as an ambulance.

Trans 309.04 SPECIALIZED EMERGENCY MEDICAL CARE VEHICLES.

(1) In recognition of their highly specialized design, construction, equipment and function, mobile intensive care units and intensive care vehicles designed and equipped for neonatology medical services, that are used only for transportation of patients between hospitals, are exempt from the vehicle equipment standards prescribed in ss. Trans 309.09 to 309.11, 309.14, 309.15(3) to (5), 309.18, 309.19 and 309.20 and subch. III.

(2) Vehicles subject to this section may not be used to respond to accident calls and shall be used only for mobile intensive care or neonatology medical care purposes.

Trans 309.05 EXCEPTIONS FOR AMBULANCES IN SERVICE BEFORE DECEMBER 30, 1979. (1) Any ambulance titled to a licensed ambulance service provider before December 30, 1979 shall meet the

requirements of subchs. II and III, except that the owner is not required to:

- (a) Alter warning lamps already installed on the vehicle;
- (b) Install spot or flood lamps;
- (c) Install an air conditioner in the cab and patient compartment; and

- (d) Install the 3000 liter, M-size oxygen equipment if hospital type piped oxygen is provided and there is insufficient room for an M-size cylinder.

(2) Any ambulance titled to a licensed ambulance service provider on or after August 1, 1976 and before December 30, 1979 need not be altered to provide a 12-inch aisle, if the patient compartment is at least 116 inches in length and at least 60 inches in height.

(3) In addition to the exception enumerated in sub. (1), any ambulance, titled to a licensed ambulance service provider as of August 1, 1976, is exempt from the interior dimensional standards specified in s. Trans 309.09 if the interior of the vehicle's patient compartment is:

- (a) At least 100 inches in length and at least 48 inches in width; and

- (b) At least 54 inches in height and there is at least 39 inches of space between the surface of the litter and the ceiling. Any ambulance that is continued in service under this subsection that does not meet all other requirements of this chapter may not display the "Star of Life" symbol.

(4) The right to continue operation of ambulances under this section shall exist for the effective life of the vehicles, but that right is not transferable to any other person.

Trans 309.06 SALE OR LEASE OF NEW OR USED VEHICLES FOR USE AS AMBULANCES. Any person selling or leasing any new or used vehicle that is intended to be used as an ambulance shall provide the purchaser or lessee with a written notice stating that the vehicle complies with the requirements of this chapter.

Trans 309.07 VARIANCES. (1) Any licensed ambulance service provider having an ambulance that is subject to s. Trans 309.05(3) but which does not meet the interior dimensional specifications listed in s. Trans 309.05(3)(a) and (b), may apply to the department for a variance to permit the continued operation of the vehicle as an ambulance under this chapter.

(2)(a) The department may grant a variance if it determines that the lack of such variance will create an undue hardship in meeting the emergency medical service needs of the community the applicant serves.

(b) In determining whether an undue hardship may be created if a variance is not granted, the department shall consider:

1. The kind and amount of emergency medical services available in the immediate area served by the applicant;

2. The presence of other ambulance service providers in surrounding communities that might be available to assist in emergencies through mutual aid agreements or other similar arrangements;

3. The number and type of emergency and nonemergency service calls made by the applicant within the 2-year period immediately preceding the date of application;

4. Any plans developed by the applicant to upgrade the existing vehicles to established specifications; and

5. Any other information that may be relevant to the question of the need for a variance in the particular case.

(3) Each application for a variance shall be referred by the department to the department of health and social services for review and recommendation. The department shall give great weight to such recommendation when deciding whether a variance should be granted.

(4) The department shall recognize as valid all waivers or variances issued to licensed ambulance service providers by the department of health and social services under s. H 20.03(4)(f) prior to July 1, 1979.

(5) The issuance of a variance to any person for any ambulance does not exempt that vehicle from the annual inspection requirements imposed in this chapter.

(6) The right to continue operation of an ambulance for which a waiver or a variance has been granted or recognized under this section is not transferable to any other person.

SUBCHAPTER II VEHICLE STANDARDS

Trans 309.09 PATIENT COMPARTMENT INTERIOR DIMENSIONS. (1)

The patient compartment shall have not less than 300 cubic feet of space less 10% deviation for cabinets and shall meet the following specifications:

(a) Length. Measured from the partition to the inside edge of the rear loading doors, the patient compartment shall be not less than 116 inches in length. There shall be not less than 25 inches and not more than 30 inches of unobstructed space at the head of the primary patient, measured from the face of the backrest of the attendant's seat to the forward edge of the primary cot.

(b) Width. After cabinet and cot installation there shall be not less than 12 inches nor more than 24 inches of clear aisle walkway between the elevating wheeled cot and the bench seat or nonelevating cot-bench. A center mounted cot arrangement is permitted as long as a 12 inch aisle space is maintained.

(c) Height. The patient compartment shall be not less than 60 inches in height over the patient area measured from the floor to the ceiling, exclusive of cabinets or equipment and symmetrical corners and edges.

(2) The interior of the body shall be free of all unnecessary projections. It shall be maintained in a sanitary condition. All hangers or supports for equipment and devices shall be mounted as flush as possible with the surrounding surface when not in use. Padding shall be placed at all head area obstructions which may be dangerous to persons moving about in the patient compartment. Other exposed edges shall be beveled with not less than a 1/8 inch radius or chamfer, and a 1/2 inch to 1 inch radius on exposed corners. The finish of the entire patient's compartment including interiors of storage cabinets shall be impervious to soap and water, disinfectants and mildew and shall be fire resistant.

Trans 309.10 DOORS. An ambulance shall have 2 unobstructed door openings in addition to the doors for the driver cab compartment. There shall be at least one door opening on the right forward side and a single door or double doors at the rear of the patient compartment. A forward hinged single door, double doors or a sliding type door shall have a minimum right side door opening of 30 inches in width, and 54 inches in height for Type I and III ambulances and 42 inches in height for Type II ambulances. The opening shall provide clearance to allow access and removal of a patient strapped to a long spine board. Single or double rear loading doors shall cover a clear opening of not less than 46 inches in height and 44 inches in width for Types I and III ambulances, and the manufacturer's standard for Type II ambulances. The ambulance body doors shall be equipped with not less than 250 square inches of safety glass area per door. Doors shall be designed for easy release from both the interior and exterior of the ambulance, but an accidental opening shall be prevented by an interlocking system that functions even when doors are not completely closed. Each door shall have effective compression or overlapping seals to prevent the entry of dust, water and air. Doors may contain recessed compartments to the interior for storage of supplies and devices.

Trans 309.11 BUMPERS, STEPS AND STEPWELLS. Chassis manufacturer's standard bumpers shall be furnished with the exception of the rear bumpers of Type I and III ambulances. Type I and III ambulances shall have a sturdy full width rear vehicular

and body bumper with step, secured to the vehicle's chassis-frame. The rear bumper and step shall be adequate to support a test weight of 500 pounds without flexing or buckling. If the patient compartment floor is more than 18 inches above the ground on a Type II ambulance, a step shall be installed within 2 inches of an equal distance between the ground and the patient compartment floor. All bumper steps shall be designed to prevent the accumulation of mud, ice or snow and shall be made of antiskid, open grating metal. Steps may be of a folding style but may not be located within or exposed to the interior of the ambulance when the doors are closed. All steps shall extend the full width of the door opening for which they are provided and shall be not less than 5 inches nor more than 10 inches in depth.

Trans 309.12 TIRES AND WHEELS. (1) Each tire shall have not less than 1/16 inch tread depth. The depth shall be measured at 2 points not less than 15 inches apart in any major tread groove at or near the center of the tire.

(2) Wheels, tires and brake drum assemblies shall be in balance up to speeds of 70 miles per hour.

(3) Snow tires with tungsten carbide studs may be installed on an ambulance from the 15th day of November each year through the 1st day of April of the following year.

(4) Recapped tires may not be installed on any ambulance.

Trans 309.13 BATTERIES. All ambulances shall be equipped with a labeled "Battery Selector Device" 2-battery system. All batteries shall be securely attached to prevent dislocation in the

event of an accident. When mounted outside of the engine compartment the battery shall be contained in a closed, drained, weather-tight and vented compartment in the body skirt, which shall retain the battery in the event of an upset or rollover. The battery compartment door or cover shall be secured by a latch. The battery cables may not be spliced.

Trans 309.14 ENVIRONMENTAL CLIMATIC EQUIPMENT. All ambulances shall be equipped with a complete climate environmental system to supply and maintain clean air conditions and an inside temperature at a comfortable level in both driver and patient compartments. The various systems for heating, ventilating and air conditioning may be separate or combination systems that permit independent control of environment within each compartment. The driver and patient compartment environments may not be dependent upon one another in any way.

Trans 309.15 EXTERIOR AMBULANCE LIGHTING. (1) GENERAL LAMPS. Ambulances shall be equipped with headlamps, directional signal lamps, tail lamps, stop lamps, parking lamps, sidemarker lamps, license plate lamps, backup lamps, hazard warning lamps, clearance lamps and spot lamps meeting the requirements of ch. 348 of the Wisconsin Statutes. Alternating headlamps are not permitted.

(2) EMERGENCY WARNING LAMPS. (a) All ambulances shall be equipped with warning lamps consisting of:

1. Except as provided in par. (b), two top-corner mounted alternating flashing red lamps facing forward with a white flashing light mounted at an equal distance between them;

2. Except as provided in par. (c), two top-corner mounted alternating flashing red lights facing to the rear;

3. Two top-corner mounted alternating flashing red lights facing to the right side;

4. Two top-corner mounted alternating flashing red lights facing to the left side; and

5. At least 2, red or red and white, flashing or rotating warning lamps located in, on, behind or in front of the vehicle's radiator grill. The lamps shall be designed and mounted so as to be plainly visible and understandable from a distance of 500 feet during both normal sunlight and hours of darkness.

(b) The lights required in sub. (2)(a)1 may be replaced with a light bar with at least 2 rotating red or red and white lights which covers the same area.

~~(c) The lights required in sub. (2)(a)2 may each be replaced with a rotating red light revolving on a horizontal plane.~~

(d) Emergency warning lamps may not be obstructed by open doors.

(e) Ambulance service providers shall not be required to alter emergency warning lamps already installed on ambulances in service prior to the effective date of this rule.

(3) FLOODLAMPS. Sealed flood lighting units shall be located at the rear and on the left and right sides of the ambulance. Floodlamps shall be integrally mounted below the roof line but not less than 75 inches above the ground and may not be obstructed by open doors. Each flood lamp shall have a minimum of

800 candlepower output. Flood lighting at the rear shall be arranged to illuminate the ground area immediately surrounding the loading doors. The switches shall be shielded and shall control each side separately.

TRANS 309.16 INTERIOR AMBULANCE LIGHTING. (1) DRIVER COMPARTMENT. The driver compartment shall be equipped with a dome lamp, instrument panel lamps and indicators, master switch panel or console lamps and door-open indicator. The lighting shall be designed and located so that no glare is reflected from surrounding areas to the driver's eyes or line of vision from instrument and switch control panels or other areas that are illuminated while the vehicle is in motion.

(2) PATIENT COMPARTMENT. The patient compartment shall be equipped with overhead or dome lighting and switch panel lighting. Only white colored lamps or lenses may be used in the patient compartment. Patient compartment lights shall be automatically activated when the entrance doors are opened or when otherwise controlled by the driver's master switch. Interior fixtures shall be nearly flush mounted and may not protrude more than 1.5 inches. Florescent lights that operate on 12 volts may be used, but they may not extend more than 4 inches from the mounting surface. Florescent fixtures may be mounted at the intersection of the ceiling and walls, and shall be equipped with removeable covers that positively lock in place.

(3) ILLUMINATION LEVELS. Normal illumination in all patient areas shall be not less than 15 foot candle intensity measured along the entire center line of the clear floor without any outside ambient light. The primary cot and squad bench shall be provided with 35 to 55 foot candles of illumination measured on at least 90% of their surface. Lighting levels shall be controlled by the ambulance attendant with switches or with a fireproofed Underwriter's Laboratory approved rheostat.

Trans 309.17 SIREN AND PUBLIC ADDRESS SYSTEM. The combined siren and public address system shall include radio amplification capability with speaker and noise cancelling microphone. The siren's sound patterns shall consist of wail, yelp and "HiLo" sounds. The wail sound pattern shall have both automatic and manual controls.

Trans 309.18 COMMUNICATIONS. (1) Each ambulance shall have a permanently mounted radio to contact the hospital emergency department of the hospitals it serves.

(2) Each ambulance service provider operating ambulances staffed either wholly or partially with paramedics shall have "walkie-talkie" or remote contact for personnel when they are away from the ambulance.

Trans 309.19 COLOR, LETTERING AND MARKINGS ON AMBULANCES THAT DISPLAY THE "STAR OF LIFE" SYMBOL. (1) The exterior color of any ambulance on which the "Star of Life" symbol is displayed shall be white in combination with an orange stripe and blue lettering and emblems. An orange stripe not less than 6 inches wide nor more

than 14 inches wide shall encircle the entire ambulance body just below the lowest edge of the cab windows, but the front of the hood panel may be excluded. This band when viewed horizontally shall appear as a stripe nearly parallel to the road.

(2) The material for emblems and markings shall be reflectorized. The reflective colors shall be blue and white. The emblems and markings shall be of the type, size, color and location as follows:

(a) Front Markings. The word "AMBULANCE" in block type blue letters not less than 4 inches high shall be mirror image centered above the grills. A "Star of Life" symbol not less than 3 inches on a 4-inch white field shall be placed both to the right and left of the word "AMBULANCE".

(b) Side and Rear Markings. A "Star of Life" symbol not less than 16 inches high on an 18-inch white field shall be placed on the right and left side panels of the ambulance. A "Star of Life" symbol not less than 12 inches high on a 14-inch white field shall be placed on each rear door window glass, or on each rear door panel. The "Star of Life" emblem may be placed on each window without the white field when space is limited. The word "AMBULANCE" in block type blue letters not less than 6 inches high shall be centered alongside or under the "Star of Life" symbol on each side and the rear of the vehicle.

Trans 309.20 COLOR, LETTERING AND MARKINGS ON AMBULANCES THAT DO NOT DISPLAY THE "STAR OF LIFE" SYMBOL. (1) Any ambulance on which the "Star of Life" symbol is not displayed may be painted

any color or combination of colors and shall bear the lettering and markings prescribed in sub. (2).

(2) The material for lettering and marking shall be a color contrasting with the color of the ambulance. The use of reflectorized material for the lettering and markings is preferred, but is not mandatory. The lettering and markings shall be of the type, size, color and location as follows:

(a) Front markings. The word "AMBULANCE" or "RESCUE SQUAD" in block letters not less than 4 inches high shall be centered above the grill. The use of mirror image lettering on the front marking is preferred, but is not mandatory.

(b) Side and rear markings. The word "AMBULANCE" or "RESCUE SQUAD" in block letters not less than 6 inches high shall be placed on each side and on the rear of the vehicle body.

SUBCHAPTER III MEDICAL AND SURGICAL EQUIPMENT

Trans 309.21 STRETCHERS, COTS AND RESTRAINTS. (1) Every ambulance shall be equipped with the following: one commercial elevating wheeled cot maintained in good working order made up with a sheet, two blankets and a pillow; one bench seat or a non-elevating wheeled cot-bench; and a chair stretcher or a combination stretcher chair with legs and 2 wheels, designed to permit a patient to be carried on stairways and through other narrow areas. Each ambulance shall be equipped with a crash stable slide, center mounted, or equivalent cot fastener assembly of the quick release type to secure the elevating wheeled cot and

the non-elevating wheeled cot-bench to the ambulance body. The cot fastener assembly shall be the manufacturer's approved bracket for the cot used.

(2) At least 3 strap-type restraining devices for the chest, hip and knee shall be provided for each stretcher, bench seat and cot to prevent longitudinal or transverse dislodgement of the patient during transit. Restraining straps shall be made of nylon and shall be at least 2 inches wide. The straps shall be constructed as a 2-piece assembly with quick release buckles and shall be removable for easy cleaning.

(3) Every ambulance shall be equipped with seat belts for the driver and each passenger in the driver compartment; a seat belt for the ambulance attendant's seat in the patient compartment; and three sets of seat belts for the bench seat or non-elevating wheeled cot-bench in the patient compartment.

Trans 309.22 SUCTION ASPIRATOR SYSTEM. (1) An engine vacuum operated or electrically powered suction aspirator system shall be provided for the primary patient. The installed suction system shall be powerful enough to provide an airflow of at least 20 liters per minute at the end of the delivery tube and a vacuum of at least 300 millimeters of mercury to be reached within 4 seconds after the tube is clamped. The suction line shall be securely fastened to prevent damage, but shall remain accessible for inspection and repair. The engine vacuum type aspirator system shall be connected to a check valve and reservoir chamber having a volume of not less than 575 cubic inches, in line between the

vacuum source and the aspirator. Aspiration suction shall be connected to a single, plug-in, self-sealing valve. The suction line connection shall be a labeled, plug-in outlet located near the oxygen outlets, but far enough away to permit easy handling of necessary component parts. The suction system shall include 2 mating outlet fittings or a yoke for the valve connection. The aspirator unit shall be securely mounted and located near the primary patient. The vacuum indicator gauge shall be approximately 3 inches in diameter, with readout increments of not less than 10 mm. Hg., and numerical markers at least every 100 mm. Hg. The total range shall be at least 0 to 300 mm. Hg. The vacuum adjuster shut-off valves, either in combination or separately controlled, shall control vacuum setting within 10 mm. Hg. and discontinue aspiration instantly. The collecting bottle shall be nonbreakable and transparent with not less than 500 cc holding capacity. One spare nonbreakable suction collecting bottle shall be stored nearby if a disposable bag is not used. The following accessories shall be furnished and stored to be readily available: one suction rinsing water bottle; one semi-rigid non-metallic pharyngeal suction tip; at least one spare suction tip and catheters; one 6-foot length or more of translucent wide bore, nonkinking suction tubing, reasonably thick walled to prevent its collapse under high suction.

(2) Every ambulance shall be equipped with a portable suction unit providing a vacuum of at least 300 mm. Hg. and a free airflow rate of at least 15 liters per minute. Portable canister suction

units may not be used. Oxygen or battery powered units shall be capable of providing at least 30 minutes of continuous suction at the required vacuum and flow levels. The portable suction unit shall be fitted with wide bore, clear, nonkinking suction tubing and a rigid nonmetallic pharyngeal suction tip and applicable accessories and controls.

Trans 309.23 OXYGEN EQUIPMENT. (1) The ambulance shall have a hospital type piped oxygen system capable of storing and supplying a minimum of 3,000 liters of medical oxygen. The main oxygen supply shall be provided by at least one "M" size cylinder, painted green with a minimum of 500 pounds PSI. The oxygen cylinders shall be located in a storage compartment. The cylinder controls shall be accessible from inside the vehicle. The pressure gauge shall be visible from the ambulance attendant's seat or squad bench and from the site where the cylinder change is accomplished. The piped oxygen system shall include a reducing valve, a nonadjustable pressure regulator preset to 50 PSI line pressure installed at the cylinder, and nonferrous piping and low pressure hoses suitable for medical oxygen. Oxygen piping shall be concealed and not exposed to the elements or damage, securely supported, and readily accessible for inspection and replacement. Oxygen shall be piped to self-sealing outlets. One duplex oxygen outlet station for the primary patient shall be located on the action wall recessed area and one oxygen outlet for the secondary patient shall be located at the squad bench. The oxygen wall

outlet for the primary patient shall be equipped with a plug-in flowmeter and delivery tube located within 40 inches of the ambulance attendant's seat.

(2) No water shall be stored in the oxygen system.

(3) Space shall be provided for a portable oxygen unit. It shall be located near a patient compartment door and shall be reachable from outside of the ambulance. The portable oxygen unit shall have at least a 300 liter "D" size cylinder, painted green and shall be equipped with a yoke, a pressure gauge, a non-gravity dependent flowmeter, a delivery tube and oxygen masks. The unit shall be capable of delivering an oxygen flow of at least 15 liters per minute. Portable cylinders or kits shall be secured with quick release securing fittings. A full spare cylinder shall be stored in the ambulance. Oxygen masks, with or without bags, shall be semi-open, valveless, transparent and easy to clean and decontaminate, or shall be disposable.

(4) There shall be two bag resuscitators without a sponge rubber inside. One bag shall be an adult size and one shall be a pediatric size. The face masks shall be transparent.

Trans 309.24 MEDICAL AND SURGICAL EQUIPMENT. (1) All ambulances shall be equipped with the following:

(a) Two adult and two pediatric size oxygen masks.

(b) Two sets of oral airways from size 1 to 6.

(c) Not less than six nasopharyngeal airways from size 20 fr to 34 fr.

(d) Not less than six, 10 x 30 inch universal or trauma dressings.

(e) Not less than twenty-five assorted sterile gauze pads, 4 x 4 inches or larger.

(f) Not less than twelve soft rolled self-adhering bandages, 3 inches wide or larger.

(g) Two rolls of adhesive tape, 1 inch or larger.

(h) Two burn sheets.

(i) Not less than six triangular bandages.

(j) Bandage shears, 7 inches or larger.

(k) One roll of occlusive material such as plastic wrap.

(l) One aluminized rescue blanket.

(m) One adult, one pediatric and one large adult blood pressure cuff calibrated to + or -4 mm Hg.

(n) One stethoscope.

(o) One adult commercial traction splint.

(p) One short spine board or comparable extrication device.

(q) One long spine board or comparable spinal immobilation device.

(r) Padded board splints: 4.5 feet x 3 inches, 2 each; 3 feet x 3 inches, 2 each; 15 inches x 3 inches, 2 each. At the option of the registrant, similar splints of cardboard, plastic, wire ladder, malleable aluminum or canvas slotted lace-in construction may be carried in place of the 3-foot and 15-inch long board splints.

(s) Sterile irrigation solution, preferably in plastic bags, with necessary starting equipment to include large-bore tubing and flow control.

(t) One telescoping IV pole and holder designed for use with the elevating wheeled cot.

(u) Compartmentalized pneumatic trouser kit with carrying case.

(v) Obstetrical kit including all of the following:

1. Sterile gloves.
2. Scissors or disposable scalpels.
3. Two umbilical cord clamps.
4. Sterile dressings.
5. Towels.
6. Plastic bags.

7. Blanket or other swaddling device.

(w) Poison kit including all of the following:

1. Syrup of Ipecac.
2. Activated charcoal.
3. Measuring device calibrated in milliliters or 1/2 tablespoons.

(x) A laryngoscope and set of blades containing adult and pediatric sizes, or disposable one piece laryngoscopes in adult and pediatric sizes.

(y) One adult and one pediatric size Magill forceps.

(z) At least two pair of sterile, disposable examination gloves and at least three surgical masks.

(aa) Liquid glucose.

(2) In addition to the medical and surgical equipment specified in sub. (1), ambulances staffed with EMT intermediates shall be equipped with the following:

(a) Sterile intravenous infusion agents, preferably in plastic bags, with necessary IV starting equipment.

(b) Subcutaneous injection equipment.

(c) Esophageal obturator airway or gastric tube airway or both.

(d) Prepackaged medications, drugs and solutions specified in the standard operating procedures approved by the medical director.

(3) In addition to the medical and surgical equipment specified in subs. (1) and (2), ambulances staffed by paramedics shall carry the following:

(a) Electrocardiogram monitor with tape printout.

(b) Defibrillator.

(c) Intubation equipment as specified by the coordinating physician.

(d) Medications and drugs specified in the standard operating procedures approved by the coordinating physician.

Trans 309.25 EXTRICATION EQUIPMENT. (1) Every ambulance shall be equipped with a compartment providing at least 10 cubic feet of space for the storage of extrication equipment and

assorted hand tools. Small hand tools shall be contained in a single pouch style carrying device or tool box.

(2) Unless an ambulance is accompanied by a rescue vehicle on every accident call pursuant to a written agreement with a rescue squad, the following equipment shall be carried in the equipment compartment of each ambulance:

- (a) Three flares or reflectors.
- (b) One 12-inch adjustable wrench.
- (c) One screwdriver for slot headed screws.
- (d) One #4 Phillips screwdriver.
- (e) One hacksaw and 12 inch blades.
- (f) One 10-inch locking grip pliers.
- (g) One sledge hammer of at least 4 pounds.
- (h) One fire ax.

(i) One 24-inch wrecking bar.

(j) One 51-inch crowbar with pinch point or a Wisconsin bar.

(k) One bolt cutter with not less than a 1/2-inch jaw opening.

(l) One portable powerjack and spreader tool with not less than a 4 ton capacity.

(m) One shovel.

(n) One double action tin snip of not less than 8 inches.

(o) Not less than 20 feet of 1/2-inch nylon or propylene rope or 3/4-inch manila rope.

(p) Hard hats and gloves.

(q) Safety goggles or face shield.

(r) One two-ton Come-A-Long.

(s) Two rescue pull chains of not less than 10 feet in length with grab hooks.

Trans 309.26 STANDARD MANDATORY MISCELLANEOUS EQUIPMENT. (1)

All ambulances shall be equipped with the following:

(a) One five pound fire extinguisher unit with a 10BC rating in a quick-release bracket, mounted in the cab section or body and reachable from outside the ambulance.

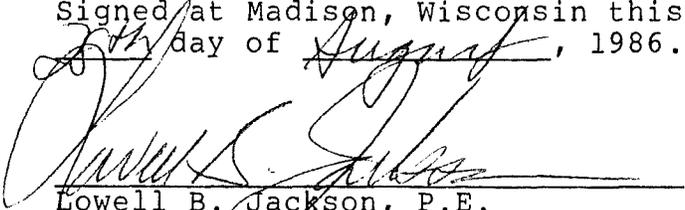
(b) "No Smoking" signs placed conspicuously in the cab and patient compartment.

(c) Two portable, battery operated lights.

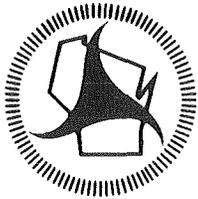
(END)

This rule which repeals ch. Trans 157 and creates ch. Trans 309 shall take effect upon the first day of the month following publication as provided in s. 227.22(1)(intro.), Stats.

Signed at Madison, Wisconsin this
20th day of August, 1986.



Lowell B. Jackson, P.E.
Secretary
Wisconsin Department of
Transportation



Wisconsin Department of Transportation

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August 28, 1986

Mr. Gary Poulson
Assistant Revisor of Statutes
30 West Mifflin Street
Suite 904
Madison, Wisconsin 53703

RE: Clearinghouse Rule 86-29
In the Matter of the Rulemaking
Affecting TRANS 157 and TRANS 309,
Wis. Admin. Code, Relating to
Ambulance Inspection and Ambulance
Equipment Standards

Dear Mr. Poulson:

Enclosed for filing, pursuant to s. 227.20, Wis. Stats., is a certified copy of CR 86-29, an administrative rule relating to ambulance inspection and ambulance equipment standards. An additional, uncertified copy of CR 86-29 is enclosed to be used as a printer's copy. This rule is submitted by the Wisconsin Department of Transportation.

Sincerely,

A handwritten signature in cursive script that reads "Barbara F. Bird".

Barbara F. Bird
Assistant General Counsel

BFB:dlm
Enclosures
CC: K. Sue Gallagher
Maynard Schneider