

**CODE OF MASSACHUSETTS REGULATIONS
TITLE 730: MASSACHUSETTS TURNPIKE AUTHORITY
CHAPTER 7.00: USE OF THE MASSACHUSETTS TURNPIKE AND
THE METROPOLITAN HIGHWAY SYSTEM**

7.07: Limitations on Large Tandem Units

(1) Scope. 730 CMR 7.07 applies exclusively to large tandem units.

(2) Use of Ways. Tandem units are not permitted in the Tunnels. No operator may operate a large tandem unit on any way other than the Turnpike. An operator may operate a large tandem unit on the Turnpike only if the Authority has issued a large tandem unit permit pursuant to 730 CMR 7.06(2).

(3) Configuration and Length. A complete large tandem unit consists of a tractor, first semi-trailer, dolly, and second semi-trailer. The length of either semi-trailer may not be in excess of 48 feet, and the total length of the combination, including the dolly and load, may not exceed 120 feet, provided, however, that the overall length of loaded tandem trailer automobile haulers may not exceed 108 feet and may be increased to 109 feet by load overhang.

(4) Maximum Gross Weight. A large tandem unit must be registered for the gross weight that it carries and certified by the original manufacturer to carry this weight. The vehicle weight of a large tandem unit may not exceed 127,400 pounds. The maximum gross weight of the tractor and first semi-trailer may not exceed 71,000 pounds. The maximum gross weight of each unit of dolly and semi-trailer may not exceed 56,400 pounds.

The maximum gross weight that may be carried upon any combination of units is limited by the maximum gross weight that can be carried upon each unit and its axles. The maximum gross weight for the unit of tractor and first semi-trailer is governed by this formula: 35,000 pounds plus 1,000 pounds per foot between the center of the foremost axle of the tractor and the center of the rearmost axle of the first semi-trailer. The gross load on a unit may not exceed the sum of the allowable gross loads on the axles, which are as follows:

Maximum gross weight on any one axle	22,400 pounds
Tandem axles on one vehicle (under 10 feet apart) (Axles measuring less than 46 inches between axle centers are considered as one axle.)	36,000 pounds

The limit of 127,400 pounds permitted under 730 CMR 7.07(4) requires a minimum axle spacing of 92 feet, measured between the center of the foremost axle of the tractor and the center of the rearmost axle of the rearmost semi-trailer. If the axle spacing is less, the permissible gross weight is correspondingly reduced.

(5) Size and Weight Limitations Generally. The provisions of 730 CMR 7.00 with respect to size and weight that are not inconsistent with 730 CMR 7.07(4) are applicable to large tandem units unless specifically excluded under the terms of a large tandem unit permit.

(6) Approval of Vehicle or Equipment Used to Tow. The owner or lessee of a large tandem unit must file a description of the tractor, dollies, and any semi-trailer used to tow another semi-trailer with the Authority on Forms MTT-3, MTT-4, and MTT-5, respectively. The owner or lessee must obtain the Authority's approval of the vehicles before they are used under a large tandem unit permit. The Authority may withdraw its authorization to use the vehicles at any time at its sole discretion.

(7) Certification of Tractors. No operator may operate a large tandem unit unless the Authority has certified that the tractor of the unit is appropriate for the purpose. Both the tractor manufacturer of each tractor used in a large tandem unit and the owner or lessee of the unit must certify to the Authority prior to the approval of the tractor that it is capable of hauling the maximum permissible gross load to be transported by the owner or lessee at a speed not less than 20 m.p.h. over the Turnpike. (The maximum grade on the Turnpike is 7.50%, and the length of the longest such grade is approximately 1.75 miles.) If it is

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determined after the tractor is in use as part of a large tandem unit that the tractor cannot meet this requirement, the Authority's approval may be withdrawn, and, in that event, the tractor may not be used as part of a large tandem unit on the Turnpike until the gross loads are reduced, the tractor is modified, or other corrective measures are taken. Upon a new certification by both the tractor manufacturer and the owner or lessee that corrective measures have been taken and the tractor is now capable of complying with the minimum speed requirement, the Authority may reinstate its approval of the tractor.

(8) Certification of Trailers. No operator may operate a large tandem unit unless the Authority has certified that the trailer of the unit is appropriate for the purpose. In order to comply with 730 CMR 7.07(13), all semi-trailers, except the rear trailer used in tandem operation, must have sufficient structural strength to permit the satisfactory attachment of the coupling device (pintle hook or its equivalent) at the rear of the trailer, and each coupling device must be capable of towing a trailer and a dolly. The permittee shall certify to the Authority that every trailer certified for use in tandem service is adequate for this service and, in addition, the trailer manufacturer on new equipment must certify the adequacy of the trailer. If the trailer has been modified to include a pintle hook, the fabricator must certify the adequacy of the pintle hook assembly. Every coupling device must incorporate a no-slack design such as air take-up, fitted pin and socket, mechanical wedging, or similar coupler designs, that eliminate fore and aft slack in the coupling of dollies to semi-trailers. The no-slack feature of the coupler must be in constant operation while the tandem trailer combination is operated on the Turnpike. The coupler used on each semi-trailer, in conformance with 730 CMR 7.07(8), must be specified by the permittee on Form MTT-4, giving semi-trailer descriptions and the vehicle identification number on the permittee's records (company number) and must be filed with the Authority in conformance with 730 CMR 7.07(6).

(9) Brakes.

(a) Compliance with Federal Regulations. The brakes on a vehicle or dolly converter or combination of vehicles used in a large tandem unit must comply with federal regulations as published in 49 CFR Part 393, Subpart C, as revised and effective on the date of the vehicle's entry upon or use of the Turnpike.

(b) Compliance with State Law. A vehicle or dolly converter or combination of vehicles used in a large tandem unit must meet the requirements of the provisions of the M.G.L. c. 90.

(c) Braking Devices Required. The brake application line of every large tandem unit certified on or after June 1, 1968, must be equipped with suitable devices to accelerate application and release of the brakes of the towed vehicles. These devices must be so arranged that the brake application signal does not pass directly through more than one trailer, but is dead-ended at the rear of the trailer or, alternatively, at the dolly, and the application signal then is retransmitted to the dolly and the second trailer. The devices required for retransmission of the application signal must be closely connected to and supplied by air reservoirs that have their air supplied to them by the emergency line. In the event of rupture of the application line on the towed vehicle of a large tandem unit, the loss of brake application must be limited upstream of the loss to those vehicles between the rupture and the first retransmission device.

(d) Brakes on Steering Axle. A tractor used in a large tandem unit must have brakes on the steering axle.

(10) Axles. A tractor used in a large tandem unit with a gross weight of more than 110,000 pounds must be equipped with tandem rear axles, each of which must be engaged to bear its full share of the load on the roadway surface.

(11) Emergency Equipment. Each tractor used in a large tandem unit must be equipped at a minimum as follows:

(a) Federal Regulations. Emergency equipment as required by 49 CFR Part 393, Subpart H, as revised and effective on the date of the tractor's entry upon or use of the Turnpike.

(b) Fuses. At least one spare fuse or other overload protective device, if the devices used are not of a reset type, for each kind and size used.

(c) Chains. One set of tire chains for at least one driving wheel on each side between October 15th and May 1st.

(d) Fire Extinguishers. Fire extinguishers that have an aggregate rating of 20 BC.

(12) Vehicle Identification. The owner or lessee shall stencil the tractor weight on the left

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side of each tractor used in a large tandem unit. The Authority issues an identification number that the owner or lessee shall also stencil on the left side of each tractor used in a large tandem unit. The Authority also issues a certificate bearing the complete description of a particular tractor, including the maximum permissible gross load to be transported, and the operator shall suitably protect and carry this certificate in the cab of the tractor that it describes. A vehicle certified for less than 127,400 pounds may not exceed the weight indicated on the certificate. The Massachusetts State Police and Authority personnel may examine the certificate and compare its description with the vehicle in which the certificate is carried. A discrepancy between the description on the certificate and the actual description of the vehicle may result in the withdrawal of the approval of the particular tractor or all of the vehicles and equipment of the owner or lessee. Compliance with the Provisions Governing the Operation of Tandem Trailer Combinations of the New York State Thruway Authority requiring the issuance of an identification number, its stenciling on the tractor, and the issuance of a certificate describing the tractor is compliance with the similar requirements of 730 CMR 7.07.

(13) Tandem Assembly. In the assembly of large tandem units prior to their operation on the Turnpike, the operator shall ascertain the total gross weight of each trailer of the proposed combination. In the event that the gross weights of the trailers vary by more than 20%, the operator shall couple them for each trip according to their gross weight, that is, with the heaviest trailer coupled to the tractor.

(14) Dollies, Safety Chains, and Cables.

(a) Converter Dolly. Every converter dolly certified on or after June 1, 1968, used to convert a semi-trailer to a full trailer may have either single or tandem axles. The operator shall couple the dolly with one or more safety chains or cables to the frame, or to an extension of the frame, of the motor vehicle by which it is towed. Attachment of these chains or cables to the pintle hook or to any other device on the towing vehicle to which the tow bar is attached does not meet this requirement; provided, however, that a separate place of attachment independent of the pintle hook on a pintle hook forging or casting may be used to attach the safety chains or cables to the towing vehicle.

(b) Slack in Chains or Cable. Safety chains or cables may have no more slack than is necessary to permit proper turning.

(c) Strength of Chain or Cable. Each chain or cable and each means of attachment must have an ultimate strength at least equal to the gross weight of the vehicle being towed.

(d) Connection of Chain or Cable. Chains or cables must be connected to the towed and towing vehicles and to the tow bar in a manner that prevents the tow bar from dropping to the ground in the event that the bar fails or becomes disconnected.

(e) Chain or Cable on Converter Dolly with Hinged Tow Bar. Every converter dolly with a hinged tow bar must be equipped with two safety chains, or cables, or a bridle arrangement of a single chain or cable, attached to its frame or axle at two points as far apart as the configuration of the frame or axle permits. These chains or cables must be either two separate pieces, each equipped with a hook or other means for attachment to the towing vehicle, or a single piece leading along each side of the tow bar from the two points of attachment on the towed vehicle and arranged into a bridle with a single means of attachment to be connected to the towing vehicle. When a single length of cable is used, a thimble and twinbase cable clamps must be used to form the forward bridle eye. The hook or other means of attachment to the towing vehicle must be secured to the chain or cables in a fixed position.

(f) Chain or Cable on Converter Dolly without Hinged Tow Bar. Converter dollies with solid tongues and without hinged tow bars or other swivels between the fifth wheel mounting and the attachment joint of the tongue eye or other hitch device may be equipped with either one or two safety chains or cables, provided that, if only one chain or cable is used, it must be in line with the center line of the trailer tongue. The point of attachment of these chains or cables to a solid tongue converter dolly is optional provided only that the attachment is to the rear of the attachment of the tongue eye or other hitch device.

(g) Points of Attachment. Where two safety chains or cables are used and attached to the towing vehicle at separate points, the points of attachment on the towing vehicle must be located equally distant from, and on opposite sides of, the center line of the towing vehicle. Where two chains or cables are attached to the same point on the towing vehicle, and where a bridle or a single chain or cable is used, the point of attachment must be on the center line of the towing vehicle.

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(h) Compliance with Federal Regulations. Coupling devices and towing devices must comply with the federal regulations as stated in 49 CFR Part 393, Subpart F, on the date of the large tandem unit or one of its component's entry upon or use of the Turnpike.

(15) Indication That Trailers Form One Unit. When the distance between the rear of the one semi-trailer and the front of the following semi-trailer is ten feet or more, the dolly must be equipped with a device, or the trailers must be connected along the sides with suitable material, that will indicate to other traffic that the trailers are connected and are operating as one unit. The Authority must approve the type of device or connection prior to its use on a large tandem unit.

(16) Lighting. Each trailer in a tandem trailer combination must be equipped at a minimum with electric lamps and reflectors mounted on the vehicle as follows:

(a) Amber Clearance Lamps. Two amber clearance lamps on the front, one at each side of the trailer.

(b) Rear Lamps. On the rear: one red tail lamp; one red or amber stop lamp; two red clearance lamps, one on each side; two red reflectors, one on each side.

(c) Side Lamps. On each side: one amber side-marker lamp located at or near the front; one red side-marker lamp located at or near the rear, one amber reflector, located at or near the front; one red reflector, located at or near the rear.

(d) On Dolly Converter. Each dolly converter, when towed singly by another vehicle, and not as a part of a full Trailer, must be equipped with a minimum of one stop lamp, one tail lamp, and two reflectors on the rear.

(17) Equipment Inspection. The operator of a large tandem unit is responsible for ensuring that all certified tandem trailer equipment is systematically inspected and maintained by a competent mechanic and kept in first class condition. Inspection and maintenance of the equipment must be in accordance with the requirements outlined in 49 CFR 396.

After all of the component vehicles in a large tandem unit are completely hooked up, and prior to the departure of the large tandem unit from the assembly area, the operator, or a mechanic, shall, in addition to the pre-trip equipment inspection and use requirements set forth in 49 CFR 392.7 and 49 CFR 392.8, inspect the large tandem unit and make certain tests on the vehicle, equipment, and hook-up to determine whether each item is in safe and proper operating condition.

The items to be inspected and tests to be made include, but are not to be limited to, the following:

- Federal equipment inspection.
- Inspection of brake line to dolly and trailers.
- Inspection of electric lines to dolly and trailers.
- Inspection of coupling devices.

Following this inspection and prior to departure from the assembly area, the operator shall complete and execute a tandem trailer inspection report form provided by the Authority. A new inspection report must be prepared each time the component parts of the tandem trailer unit are rearranged, or the operator is replaced, or upon re-entry to the Turnpike after any valid departure. The operator shall keep an original inspection report in an accessible place in the vehicle for which it was prepared, and this original inspection report must be presented to a toll collector or other official or employee of the Authority, or a Massachusetts State Police officer on demand.

(18) Registration of Operators. Proposed operators of large tandem units must be registered with the Authority prior to operating such equipment on the Turnpike. Completed applications for registration must provide all specified driving, safety, and physical examination records and be accompanied by an official abstract of the driving record of the individual for whom it is being submitted. An applicant for registration as an operator of a large tandem unit must demonstrate to the Authority that the applicant has a minimum of five years of tractor trailer driving experience. The Authority issues a special identification card to each registered operator of a large tandem unit, and each registered operator shall carry this card and display it upon request to a Massachusetts State Police officer or

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Authority personnel. A registered operator may hold a large tandem unit permit for two companies at the same time, provided that each company has filed an application for this permit with the Authority and that the Authority has approved this permit. The special identification card is valid only for the operation of tractors owned or leased by the company by whom the operator is employed. The Authority may decline to register an applicant or cancel a registration at any time should the Authority determine that operational or safety considerations warrant its doing so. An operator's qualification for and possession of a valid special identification card of the New York State Thruway Authority satisfies the requirements of 730 CMR 7.07.

(19) Speed Regulations. The operator of a large tandem unit shall strictly comply with the speed regulations for these units. In particular, an operator of a large tandem unit shall strictly observe the 55 m.p.h. speed limit as well as any lower posted speed limit.

(20) Distance Between Vehicles. The operator of a large tandem unit shall maintain a minimum distance of 500 feet, or approximately two delineator spaces, under normal conditions between a large tandem unit and a vehicle traveling in front of it in the same travel lane, except when passing occurs.

(21) Insurance. In order to comply with the Authority's insurance requirements for large tandem units, the permittee must supply the Authority with either a duplicate copy of its automobile liability insurance policy or a certificate of insurance evidencing automobile liability coverage. The policy or certificate of insurance must include the insurance requirements found in the large tandem unit permit application or other applicable form or document provided by the Authority.

(22) Passing. A large tandem unit may pass another vehicle traveling in the same direction only if the speed differential between the large tandem unit and the vehicle that the large tandem unit is overtaking is adequate to allow the large tandem unit to complete the passing maneuver and return to the unit's driving lane within a distance of one mile.

(23) Reports and Observation. The owner or lessee shall, upon request, furnish to the Authority all data and information pertaining to an individual trip by a large tandem unit or the overall large tandem unit operations of the owner or lessee on the Turnpike. The owner or lessee shall afford representatives of the Authority the opportunity to observe the large tandem unit operations on the Turnpike by riding in the cab of the tractor or using other prescribed methods, all in accord with governmental regulations and insurance requirements.

(24) Tolls. The toll for a large tandem unit is the toll charge based on the classification of the vehicle under 730 CMR 7.03(1).

(25) Emergency Service and Towing Vehicles. An emergency service or towing vehicle that an owner or lessee uses to maintain its large tandem units may be certified for operation on the Turnpike on Form MTT-1, provided that the owner or lessee certifies on Form MTT-1 that:

- (a) The emergency service or towing vehicle is completely equipped with emergency lighting equipment.
- (b) The use of the emergency service or towing vehicle will conform to the provisions of 730 CMR 7.00.

(26) Renewal of Permits. The Authority may renew a large tandem unit permit monthly or annually upon the owner's or lessee's submission of Form MTT-2 requesting renewal. Form MTT-2 must be accompanied by a letter, on company stationery, signed by a duly authorized designee of the owner or lessee requesting recertification of the equipment to be continued in use in the operation of the large tandem unit, which has been certified previously pursuant to 730 CMR 7.07(8). The letter must be substantially similar to and include the information set forth in the sample letter that the Authority supplies entitled "Sample Letter for Recertification of Tandem Equipment." According to the following schedule, the Authority may subject an owner or lessee of a large tandem unit to a probationary period or to a period of suspension of operations based on the owner's or lessee's cumulative violations of motor vehicle laws or regulations or 730 CMR 7.00 that occur within a permit's annual renewal period:

- (a) three violations - six month renewal
- (b) six violations - three month renewal

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- (c) nine violations - one month renewal
- (d) 12 violations - suspension of large tandem unit permit

(27) Limitations on Permits. The Authority may, at its sole discretion, and, in whole or in part, revoke or temporarily suspend at will a large tandem unit permit. The Authority's issuance of a large tandem permit creates no property interest, and the Authority retains the right to amend or repeal, in the Authority's sole discretion and the exercise of its police or other powers, the provisions of 730 CMR 7.07 pursuant to which large tandem unit permits are issued. The Authority may temporarily suspend large tandem unit operations at any time and for any reason. Should the Authority temporarily suspend operations of large tandem units, for example, because of inclement weather, reconstruction, or other adverse operating conditions, an operator of a large tandem unit shall comply with the instructions of the Authority or the Massachusetts State Police immediately or as promptly as safe operating practices permit.

(28) Makeup-breakup Areas. Tandem trailer units may be assembled and disassembled only in special makeup-breakup areas that the Authority designates for this purpose. No combination consisting of a tractor, first semi-trailer and dolly, with or without a second semi-trailer, may leave the Turnpike and pass on to a public highway or road within the Commonwealth of Massachusetts unless permitted by law. The owner or lessee of a vehicle entering or leaving a makeup-breakup area shall supervise the movement of the vehicle across traffic to minimize the possibility of accidents. The owner or lessee of a tandem trailer unit shall employ appropriate and adequate protection devices, such as flags, flares, or lights, to warn and stop traffic while the vehicles are maneuvering. The owner or lessee of a tandem trailer unit is solely responsible for its vehicles and equipment, as well as their contents, while the vehicles and equipment are in a makeup-breakup area. Large tandem units or components of them, except dollies, may not be parked in makeup-breakup areas for more than eight hours. The use of makeup-breakup areas is restricted to trailers of registered owners or lessors that exceed 28 feet. A tandem trailer unit left in a makeup-breakup areas must be disassembled while parked in tandem lots. A trailer parked in a makeup-breakup area containing hazardous materials must have its cargo's shipping papers available in an accessible place on the front of the trailer for inspection by the Authority or a Massachusetts State Police officer.

(29) Penalties. Whoever violates any provision of 730 CMR 7.07 shall be punished by a fine not exceeding \$500 for every such offense.