



**State of Connecticut
Department of Motor Vehicles**

COMPOSITE MOTOR VEHICLES

The following requirements and information are being provided to you to assist you in the inspection and registration of a composite motor vehicle with the Department of Motor Vehicles.

1. REQUIREMENTS

A composite motor vehicle is by statute, "Any motor vehicle, composed or assembled from the several parts of other motor vehicles, or the identification and body contours of which are so altered that the vehicle no longer bears the characteristics of any specific make of motor vehicle...". Furthermore, any vehicle not assembled by a manufacturer licensed as such in the State of Connecticut is classified as a composite motor vehicle. Prior to inspection and registration, each composite owner shall file an application entitled, "Application for Inspection of Composite Motor Vehicles" (Form R-95). The application may be obtained at any Motor Vehicle office or by contacting the Department of Motor Vehicles Phone Center, 60 State Street, Wethersfield, CT 06161, phone in the greater Hartford area 263-5700 or 1-800-842-8222 toll free. All composite motor vehicles must be inspected at the Wethersfield DMV Inspection Lane prior to registration and must be in line by 3 p.m.

Requests for information regarding the inspection should be referred to the DMV Wethersfield Inspection Lane at (860) 263-5080. All composite motor vehicles **MUST** be transported on a trailer or car carrier to the inspection site (**NOT TO BE DRIVEN**), except if validly registered in another state or if the owner is a licensed dealer or repairer.

2. APPLICATION

Each completed application must be accompanied by two photographs of the vehicle, one showing the front and right side of the vehicle, the other showing the rear and left side of vehicle. In addition, the composite owner must provide proof of lawful purchase of any major component part installed in the vehicle.

3. FEE

The inspection fee shall be \$88.00, payable at the time of inspection. A \$50.00 fee will be collected for the assignment of an identification number which will be affixed to the vehicle by a Vehicle Identification Unit inspector.

BRIEF OF EQUIPMENT

Other equipment requirements may apply if safety related items arise in unusual designs. Overall vehicle width of less than 80" and GVWR less than 10,000 lbs. is assumed.

BATTERY - Must be securely mounted and vented to the outside. Batteries located in the passenger compartment must be sealed and vented to the outside. Plastic battery containers with a sealed top and vent tube through the floor are acceptable.

BODY - Torn fenders that have sharp edges are prohibited. Also prohibited are dangerous projections from any surface of the vehicle, bumpers out of place and doors, hood or trunk lids that do not properly latch. Must be adequately attached to frame.

BRAKES - Each motor vehicle other than a motorcycle shall be equipped with at least two braking systems each of which shall have a separate means of application by the operator. The service brake system shall conform to Section 14-80h of the Connecticut General Statutes and must pass the applicable brake test. The service brake pedal shall be located to the left of the throttle pedal except in the case of a vehicle equipped for a disabled person with a restricted license. The parking brake system must be completely mechanical and independent from the service brake activation system.

BRAKE LINES - Tubing must be steel and properly attached and supported (at least every 18") and hoses shall not be kinked, twisted, or frayed. Hoses must not be under tension during full right and full left-hand turn, or during full compression or full extension of suspension. Automotive stainless steel tubing and braided hoses are acceptable but compression fitting will not be allowed.

BUMPERS - Bumpers or equivalent structure attached to frame, capable of transferring impact to frame no higher than 22" for cars and 30" for MPV's and light trucks to the bottom nor lower than 16" to the top above the roadway. Equivalent structure shall include body sheet metal or cross member at or near frame ends.

DEFOGGING DEVICE - Must be capable of directing air toward the area cleared by windshield wiper. Not required on open bodied roadsters with no means of enclosure.

DOOR RELEASE MECHANISMS - Each door to a closed body passenger compartment must provide for an internal means to operate the door release mechanism. In addition, an external means shall be provided to release the driver's door. The internal release shall be of a mechanical type readily visible and accessible to occupants. External release mechanisms may consist of an electronic or mechanical means to activate the door release, thus eliminating necessity for a conventional handle. Any vehicle lacking conventional external door handles must have the inside handles so they are readily visible and accessible to allow exit from the passenger compartment in the event of an emergency.

EMISSIONS - The vehicle must have an emissions test completed before it can be registered.

ENGINE - Engine, in general, must be shrouded or covered sufficient to prevent accidental contact with moving or hot components. Hood scoops shall not exceed 4" unless the top is no more than one inch above a horizontal line (parallel to the roadway) extended from the bottom useable portion of the windshield where it meets the windshield frame or mount. Alternately, the engine compartment may be of such design as to expose engine from the left and right sides, however such compartment must be covered from the top. Covering from the top must extend from the engine firewall to radiator housing or front grille housing. Hot components that could be contacted by a pedestrian must still be protected.

EXHAUST SYSTEM AND MUFFLER - Excessive noise is prohibited. Excessive noise is defined in DMV regulations. Check will be made for muffler cutout, leaks in muffler and exhaust system and a straight exhaust or any extension or device on the tail pipe which will cause excessive or unusual noise. Engine or motor vehicle shall be so equipped and adjusted as to prevent excessive fumes or exhaust smoke. All pipes carrying exhaust gases from the engine shall be constructed and maintained with a leak proof metal and shall be directed from the muffler, or mufflers, toward the rear of the vehicle and approximately parallel with the longitudinal axis of the vehicle and approximately parallel to the surface of the roadway. On passenger vehicles exhaust pipes should extend beyond the rear axle or the side.

Properly located and shielded side exhaust may be allowed when in compliance with departmental side exhaust standards. Passenger vehicles equipped with exhaust pipes exiting to the side, forward of the rear axle, must extend rearward beyond any passenger door openings. Exhaust header pipes extending to the outside of vehicle frame rails must be shielded from excessive heat and not protrude beyond the extreme outer edge of the front or rear tires, whichever is narrower, so as not to pose a hazard to occupants or pedestrians.

FENDERS - Fenders are required over front and rear tires. Front and rear fenders must come at least half way down the rear of the tire, to the center of the axle and must start at a line directly above the axle, or be equipped with suitable mud flaps and all fenders must cover entire tread width of the tire.

FLOOR PAN - Must be capable of supporting standing weight of a 200 lb. person and prevent exhaust fumes from entering. Must be in condition to maintain structural integrity.

FRAME - Shall be capable of supporting vehicle weight without excessive flexing. Fish plates or other suitable reinforcement at points of stress. All welding shall be of industry standard quality and type. Cut and rewelded frames between the front and rear suspensions shall be cut at a 45 degree angle where possible and must have a continuous reinforcement overlapping approximately one foot.

FRONT END - Unusual play and looseness are prohibited. No more than 15 degree angle in any direction between steering linkages.

FUEL TANK AND LOCATION - Fuel tank shall be vented to the outside and constructed of a suitable metal or other specific fuel storage material, be shielded from the exhaust systems and securely fastened to the body or frame of the vehicle outside the occupant compartment. Fuel lines must be supported at points no less than 18" along its length and shielded from exhaust when within close proximity. Rubber fuel hoses shall be marked "fuel hose". Fuel tubing shall be steel. All vehicles fueled with pressurized flammable gas shall have their fuel system designed in accordance with all applicable safety standards and shall bear proper markings. The installation of liquid fuel tanks in trunks will require a steel firewall to be installed between the trunk and passenger compartment.

HORN - Shall be securely fastened and the switch shall be easily accessible to operator of vehicle when seat belted in their seat. Shall be audible, under normal conditions, for not less than 200 feet. Any unusual noise is prohibited. May not be operated by touching loose wires together or by any method other than horn button or horn ring.

LIGHTING EQUIPMENT - All measurements to lighting devices are from the center of the lens.

BRAKE LIGHTS - Two red brake lights are required and must be mounted as far apart as practicable and at a height between 15" and 72" from the roadway.

HEADLAMPS - A minimum of two DOT approved headlights are required on all motor vehicles except motorcycles. Each lamp shall have a high and low beam. The upper beam shall be of sufficient power and aimed to clearly illuminate objects on the highway for a distance of 500 feet. A high beam indicator is also required to be readily visible to operator of vehicle. No device may be attached to the headlamp that covers any part of the lens, and shall be no higher than 54" or less than 22" above the roadway and be far enough apart to indicate the vehicle width.

PARKING LAMPS - Parking lights are required on each side of the vehicle on both the front and rear and shall be non-flashing. Front may be white or amber and rear must be red.

REFLECTORS - At least two red reflectors are required at the rear which may be incorporated with the taillight lens but must be mounted no less than 15" nor more than 60" from the roadway. If reflectors are mounted optionally anywhere forward of the front half of the vehicle, then they must reflect an amber color.

TAIL LIGHTS AND MARKER LIGHT - Two red tail lights (except on motorcycles), mounted no less than 15" and no more than 72" from the roadway, and a shielded white registration plate light are required. Taillights shall be far enough apart to indicate the approximate width of the vehicle.

TURN SIGNAL LAMPS - Are required front and rear. Front may be amber or white and rear may be amber or red. They must be operable from driver's seat.

MIRRORS - Two mirrors are required to adequately show the roadway to the rear of the vehicle. Mirrors shall be free of blemishes, untarnished and unbroken and shall have no defects that would prevent an adequate rear view of the highway. Mirrors shall be properly mounted and securely fastened to prevent excessive vibration.

ODOMETER/SPEEDOMETER - Required, and must be operable, and must be tamper resistant.

SCRUB LINE - This is a straight line drawn from the bottom of one wheel rim lip to another. No components shall extend below the scrub line.

SEAT BELTS - Lap belt type seat belts shall be provided for each seating position. Belts shall be labeled as meeting or exceeding FMVSS-209. Seat belt anchored in other than the frame shall have 1/8" thick backup washer or plates with rounded corners equivalent to four (4) square inches (2 1/2" dia.) for each end of the belt.

SEATS - Must be properly secured. Attachments through sheet metal or fiberglass must have 1/8" thick backup washers or backing plates with rounded corners equivalent to 4 square inches for each of four (4) securement bolts.

SHIFT LEVER OR SELECTOR - Must not interfere with the free movement of the operator. Shift lever (or selector) shall not be straddled and must bear markings indicating the shift pattern. Vehicles equipped with automatic transmission shift selectors shall have a device to prevent starter engagement in any position other than Park or Neutral.

SIDE WINDOW GLAZING - If present, shall be automotive safety glazing and comply with DMV tint requirements.

STEERING WHEEL - Steering wheel must be located directly in front of the operator so as not to interfere with his line of sight. There shall be a clearance of at least 2" between steering wheel and cowl instrument panel, windshield or any other surface. With manual (non-power) steering a steering wheel shall not have more than 3" circumferential free motion. With power steering, a steering wheel shall not have more than 2" circumferential free motion. No steering wheel shall have an equivalent outside diameter less than 13" at its smallest radius (except if approved with special license from the Handicapped Driver Training Unit) or have pointed or sharp protrusions.

SUSPENSION - All vehicles, except motorcycles, shall have proper springs and shock absorbers. Lowest section of sprung components must not be less than 4" off the ground. Frame of vehicle shall be approximately parallel with the ground. Wheelbase must be a minimum of eighty (80) inches.

TIRES - A tire must have two-thirty-seconds of an inch (2/32") center tread. The following defects will also be cause for rejection:

1. No tread, exposed cord or worn to level of tread wear indicators.
2. Bulges.
3. Cuts or snags in excess of 1" on outside of tire.
4. Repaired with blowout patches or boots.
5. Front tires that are not at least 60% of the tread width of the rear tires.
6. Tires on each axle not of equal size and construction.
7. No "DOT" marking or if "NHS" marking is present.

VEHICLE IDENTIFICATION NUMBER (VIN) OF VEHICLE AND COMPONENTS - The vehicle owner shall make visible any original identification numbers on any component part that contains a factory vehicle or component identifying number. If an original VIN is removed from the frame or body that component, or portion thereof, must be presented as proof of the original VIN. A new VIN will be assigned by the DMV at a cost of \$50.00.

WEIGHT DISTRIBUTION - At least 20% weight on any axle.

WHEEL TRACK - Front or rear wheel track shall not be reduced below 90% of the original.

WINDSHIELD WIPER - Shall be in good working condition, air, vacuum or electric operated, capable of clearing at least 96 square inches so as to give operator a clear view directly ahead of the driver and shall be constructed and located so as to be controlled by the driver.

WINDSHIELD - Shall be approved Safety Glass, AS-1 certified, and bearing markings stating AS-1. Should be at least 10" vertical with unobstructed view. It must be free of breaks, cracks, pit marks, or discoloration that would impair a driver's vision or create a hazard and not tinted darker than 70% transmissibility. Cracks more than 20% of the width of the windshield or more than 3" from the edge of the windshield, or pit marks 3/4" diameter or larger at the line of sight are cause for rejection. Windshields as low as 7.0" may be allowed on fixed roof vehicles provided that a 1" by 8" strip type, wide-angle viewer is installed at the top of the windshield and sufficient headroom is available. Windshields on open body roadsters may be as low as 7.0" if the top of the windshield is 29" or more above the drivers seat measured 5" forward of the seat back with the seat adjusted to the rearmost and lowermost position.

WIRES - Shall be connected properly and secured at various points along entire length at least every 18". Bare wires prohibited. Shall be clear of exhaust system.

COMPOSITE MOTORCYCLES

In addition to the applicable portions of the above, motorcycle type vehicles must also adhere to the following:

DEFINITION OF MOTORCYCLE - SECTION 14-1 (29). No complete or partial enclosure of driver's seat.

BRAKES - Each composite motorcycle or motorcycle and sidecar assembled since 1974 shall be equipped with brakes on front and rear wheels excluding wheel(s) of a sidecar.

BATTERY - Required. Shall be sufficient to illuminate a white or amber front and a red rear light visible for 1000 feet.

DRIVER CHAIN OR MECHANISM - A chain or other drive mechanism guard is required.

EXHAUST - Noise must be able to pass sound level test. Shall not emit exhaust gasses in an upward direction and must have heat shield if next to passenger legs.

- FRONT END RAKE**
1. Telescopic Fork - 45 degree maximum and 20 degree minimum.
 2. Springer and Girder Fork - 55 degree maximum and 30 degree minimum.

NOTE: "Trail" requirements may apply in unusual designs.

HANDLE BARS - Must allow full right and left turn with both hands on handle grips and remain on operator's seat and must not extend into operator's line of sight and must be no more than 15" above the uppermost portion of the operator seat when depressed by the operator.

LIGHTING EQUIPMENT

HEADLIGHT - Each motorcycle shall be equipped with at least one, but not more than two, DOT compliant headlamps. Either the single or multiple beam type light shall be permissible. Multiple beam lights must have high beam indicator.

MARKER LIGHT - The rear numberplate must be illuminated with a white light.

TAILLIGHT AND BRAKE LIGHT - At least one permanently mounted red taillight and brake light. Brake light must be at least three inches (3") diameter or equivalent area (7 sq.-in), illuminate with just the front and just the rear and simultaneous front and rear brake application, and must be brighter than the tail lamp. Single side mounted brake and taillights which are not readily visible to all following traffic may require a light on each side.

TURN SIGNALS - Required on all motorcycles. Turn signal lamps shall be at least one inch (1") diameter or equivalent area and shall be mounted so as not to be blocked by any portion of the rider's or passenger's body.

REFLECTORS - At least one red rear reflector is required and may be incorporated in taillight lens. Any optional front side reflectors shall reflect an amber color.

REGISTRATION PLATES - Motorcycles required to display one number plate at rear.

SPEEDOMETER - Required.

TRANSMISSION - In addition to motor shrouding requirements, moving components must be covered sufficient to prevent accidental contact.

WEIGHT DISTRIBUTION - At least 20% weight on any axle.

NOTE FOR MOTORCYCLES - If composite is dirt bike conversion to street use see "Inspection Requirements for Modified Off Road Motorcycle."

NOTE: This edition is effective on the revision date indicated in the lower right corner of the page. Please destroy all previous editions.