PERIODIC MOTOR VEHICLE INSPECTION MANUAL FOR INSPECTORS OF PASSENGER CARS AND LIGHT TRUCKS

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
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ITEMS TO BE INSPECTED

Note: Inspectors are not required to disassemble and reassemble parts to do an inspection. For example, if a vehicle has wheel covers that cover the lug nuts, the lug nuts need not be inspected. If an inspector elects to remove the covers for the inspection, there can be no additional charge for the additional work involved.

BODY ITEMS (Form Line 29)

Exterior Body Inspection:

Check body parts for damage that compromises function or has potential for causing additional injury to someone who is hit by the vehicle. If the body is modified to the extent that a reconstructed vehicle permit is required, the vehicle must pass recon before it can pass the PMVI.

Fail if:

►Any body part is improperly installed, dislocated, or protruding from the exterior surface so as to be a potential hazard.

►The body was modified significantly but the vehicle does not have a reconstructed vehicle inspection sticker and permit. (See Reconstructed Vehicle Permit Required on Page 17)

Battery & Wiring (Form Line 29)

Fail if:

►Insulation is worn so that bare wire has potential for causing a short.

►Cable connection is loose.

►Battery is leaking, not securely mounted to the vehicle with battery securing hardware, terminals are severely corroded, or a cell vent cap is missing.

BRAKES (Line 8)

Antilock Brake System

Vehicles with an antilock brake system (ABS) have a warning light (telltale) for the ABS. It illuminates when the ignition is initially turned on, but after the computer completes its checks, the light should go out. If the light stays on, there is a problem with the antilock brakes, but the vehicle can still pass inspection. The ABS is an "add-on" to the service brakes; so if the ABS is inoperative, the vehicle can still be stopped normally. The disadvantage is that the driver will be required to control any skidding in an emergency. A driver is generally not as effective as the ABS, some of which can make 15 adjustments per second on each wheel.

Dynamic brake test

Apply brakes fairly hard at four to eight miles per hour on a clean, smooth, level, dry, hard surface.

Fail if:

►The steering wheel moves abruptly to left or right of center.

►The brakes do not stop the vehicle quickly.

►There is brake noise or response that suggests that the pads are worn too low or the rotors are warped.

►The brakes require a great deal of pedal force before they work.

Brake Failure Indicator Lamp

It is required on new cars since 1/1/68. It indicates two things: (1) hydraulic brake system failure and (2) parking brake is applied when ignition is on. To test the lamp, apply the parking brake; turn on the ignition; release the parking brake.

Fail if:

►Lamp does not illuminate, or it does not go off when brake is released. If the light stays on after the parking brake is released, check the fluid level in the master cylinder. If it is low, try to find out why it is low. There is probably a leak somewhere or the brake pads are worn significantly.

Brake Pad Wear Warning Light

Some of the newer vehicles have a telltale light on the dashboard that warns the driver that the brake pads are worn below the minimum acceptable level.

Fail if:

►The brake pad wear warning light remains illuminated after the computer completes its checks when the ignition is turned on.

Brake Pedal Movement

With engine off, check brake pedal free play.

Fail if:

► Excessive brake pedal travel (generally more than 1 inch) is required before pedal resistance is felt. This will result in a brake pedal that is too close to the floor under hard braking.

For power brakes, start the engine; apply the service brake with about 100 lbs force. The pedal should come to a stop at some point above the floor and stay there.

Fail if:

►The brake pedal does not stop moving until it touches the floor.

►The reserve distance between the pedal and the floor is less than 1.5 inches.

Parking brake (Line 9)

The parking brake must be applied by a cable. Apply on a level dry surface.

Fail parking brake **if**:

►It cannot hold the vehicle in place with transmission in low range and engine RPM increased to double the idle RPM.

►The lever or pedal will not stay in the locked position or release when the release control is operated.

Vacuum or Hydraulic power booster

If the booster is not functioning, much more effort will be required to apply the brakes. To test the booster, make 3 or 4 brake applications with the ignition off to deplete any vacuum in the booster. Then lightly apply the service brake and start the engine. The brake pedal will move down slightly if the booster is functioning properly. If a problem is suspected, the booster should be inspected to make sure that its vacuum connection and hose are in good condition and that the connection grommet seals tightly around the vacuum connection.

Fail if:

►There is no downward movement of the brake pedal when engine starts.

►A leak is detected.

Visual Brake Inspections

Fail if:

►There is hydraulic fluid leakage around the reservoir, cylinders, calipers, backing plates, tubing, hoses, master cylinder or connections, or the master cylinder fluid level is below the minimum mark.

►Any required brake hardware is not properly installed or missing.

►Any brake system component is rubbing against the body, frame, suspension system or something that can cause the component to fail.

►Brake tubing or hose is damaged so as to significantly hinder the flow of fluid or it is leaking.

►Brake rotor discs have substantial cracks extending to the edge; disc is deeply scored or grooved, the friction surface is contaminated with oil, grease or brake fluid, or the disc is worn beyond minimum thickness stamped on the rotor. (A rotor thickness measurement is not required for the PMVI. A measurement would be made only if a brake repair was made in conjunction with an inspection.)

►Any brake pad thickness is less than 1/32 inch thick or damaged so as to compromise effectiveness. This applies only when the pads can be viewed or measured without taking anything apart.

BUMPERS (Form Line 27)

The State sets a 22-inch maximum height for cars. There is no minimum height for cars. All County ordinances require both a front and a back bumper. "Bumper" for purposes of the Hawaii Revised Statutes means a horizontal load bearing protective system installed on a motor vehicle which is constructed of sturdy materials that will not shatter or split upon moderate impact and provides adequate protection against damages to the front and rear external lighting and reflective devices, hood, trunk, doors, painted surfaces, cooling system, exhaust system, and other components during a low speed impact.

Fail if:

►They do not conform to the State (291-35.1[1], HRS) or County requirements relating to height and performance.

►Bumpers are not securely installed or mounted.

►Bumpers are damaged to the extent that sharp edges or protrusions could be unnecessarily hazardous to a pedestrian who is hit by the vehicle.

DOORS & HOOD LATCHES (Lines 23 & 24)

If a vehicle was built with permanent doors (verses doors that are easily removable, like on some Jeeps) it must have doors in order to pass inspection. Doors are designed to protect occupants from a side impact and to retain occupants in a crash. All doors must have both a primary and secondary latch. Hoods that open from the front of the vehicle must have a secondary latch too. Open and close the hood and at least the two front doors to be sure they close completely and the secondary latch is functional. If damage suggests that any other door will malfunction, check it too.

Fail if:

►They do not latch in the fully closed position.

►The secondary latch does not work properly.

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[1] Maximum front and rear bumper heights: passenger vehicles =22 inches; vehicles with GVWR of 4,500 lbs. and under =29 inches; GVWR 4,501 lbs. to 7,500 lbs. 33 inches; 7,501 lbs. to 10,000 lbs. 35 inches

►A required door or hood is missing.
►A door is not properly installed or does not function properly.
►Rope, wire or similar material is used to hold doors, hood or trunk lid in place.

DRIVE TRAIN (Line 34):

The drive train is the mechanism between the engine or motor and a driven wheel. There is a variety of drive train configurations. The inspection focuses primarily on finding parts that are obviously damaged.

Fail if:

►Constant Velocity (CV) Boot is damaged to the extent that it is leaking or missing.
►Any component is severely damaged or insecurely mounted.
►Faulty starter interlock allows starter to operate with gear selector in a forward or reverse gear (Automatic Transmission only).

Wheel bearing test

Raise the vehicle so the wheel is off the ground. Grasp tire at top and bottom and gently rock it back and forth. There should be no movement. Spin the wheel and listen for any grinding noise from the bearings. This sound is different from the sound of a brake pad dragging against a rotor. There should be no noise.

Fail if:

►There is 1/8-inch movement or more at outer circumference of the tire and you hear grinding noise from the bearings.

EXHAUST SYSTEM (Line 6)

The exhaust system is designed to do two things: (1) direct exhaust fumes away from the passenger compartment and (2) reduce the noise emitted by the engine.

Fail if:

►It is leaking so as to be a health hazard to occupants.
►Any component part is not securely fastened.
►Any component part is missing, equipped with exhaust cut-outs, by-pass or similar devices.
►Emits a much louder noise than that emitted by the vehicle as equipped from the factory, or
►Exhaust gas is not exiting beyond the passenger compartment, unless the exit is in the location designed by the manufacturer.

Note: Since Hawaii is an EPA attainment area, emission inspections are not required here. Emission controls include: Catalytic converter; Positive Crankcase Ventilation (PCV); Exhaust Gas Recirculation Valve (EGR); Evaporative Controls.

FENDERS (Line 26)

Honolulu County ordinance requires every motor vehicle upon a highway, except motorcycles and motor scooters, to be equipped with fenders for all wheels. The other Counties require fenders on all motor vehicles.

Fail if:

►They do not cover the width of the tire tread;
►They are missing or loosely attached; or
►They are damaged to the extent that sharp edges or protrusions could be unnecessarily hazardous to a pedestrian who is hit by the vehicle.

FLOOR PAN (Line 28)

Carpets that cover the floor pan make inspecting it difficult or impossible in many situations. The failure criteria apply only if you are able to see the floor pan without dissembling anything.

Fail if it is rusted through or damaged to the extent that:

►It appears inadequate for supporting occupants or cargo; or

►Exhaust fumes can enter the occupant compartment of the vehicle.

GLAZING MATERIALS (Lines 17-19)

Glazing materials protect occupants from weather and flying objects. The windshield also protects against occupant ejection in a frontal crash. Unlike the windshield, the side windows are designed to shatter into small cubical pieces upon impact. In passenger cars all windows are considered requisite for driving visibility, but in vehicles built on a truck chassis (MPVs, trucks, buses) the windows behind the driver are not requisite for driving. Glazing materials must have a mark indicating that they comply with FMVSS 205. No glazing material requisite for driving visibility can be replaced with an opaque substance.

Fail if:

►A vehicle built on a car, truck or bus chassis has no windshield. If any of the other glazing material (Line 19) is missing and the absence leaves no dangerously sharp edges, the glazing can be passed.

►There are cracks, discolorations, chips, or scratches in the windshield or windows requisite for driving visibility that significantly interfere with driving visibility.

►Non-transparent (opaque) materials are used in place of glazing that is requisite for driving visibility.

►The window adjacent to the driver cannot be lowered to the down position. This assures that the driver will be able to use hand signals in the event that the electric signals fail. If the glass is missing or cannot be raised from the lowered position, the glazing can be passed.

►Glazing has less than 35% (plus or minus 6%) light transmittance. If no AS-1 mark exists, tint may not be more than 4 inches below the top of the windshield when measured from the middle point of the bottom edge of the top molding. If tint is applied to the AS-1 portion of the windshield, the tinted windshield must still have a minimum light transmittance of 70% when measured with a meter that conforms to the performance requirements of State law (291-21.5(d)(8), HRS). When measuring transmittance of the AS-1 portion of the windshield, the meter is to be taken at face value. Do not add or subtract six percentage points to the reading to accommodate for meter inaccuracy.

►The glazing has a decal or sticker that does not comply with County Ordinance. Honolulu's reads as follows:

Sec. 15-19.30 Windshields to be unobstructed *(a) No person shall drive any motor vehicle with any sign, poster or* <u>*other nontransparent*</u> *material upon the front windshield, side wings, or side or rear windows of such vehicle which* <u>*obstructs the driver's clear view*</u> *of the highway or any intersecting highway.*

(b) Except as otherwise provided in Section 15-15.5, posters or stickers approved by the chief of police shall be placed at the lower right-hand corner of the front windshield of a left-hand-driven motor vehicle or at the lower left-hand corner of the front windshield of a right-hand-driven motor vehicle, or in a location as approved by the chief of police. However, such posters or stickers so placed shall not cover

an area greater than four inches by six inches, except for non-residence permits or for military requirements, in which case an additional area four and one-half inches by six inches may be used.

(c) No person shall drive any motor vehicle with any nontransparent material or object suspended within the windshield area as viewed from the driver's seat, nor shall any person drive any motor vehicle upon the hood or radiator of which is attached any fixture ornament of any material which vibrates, swings or flutters within view of the driver of such vehicle.

►A rear window with aftermarket tinting on 2013 model year vehicles and later must not have tint over the portion through which the high mounted stop light shines. If that portion is tinted, it is considered an obstruction and the vehicle must be failed

HORN (Line 16)

Fail if:

►A horn is inoperative, not audible from a distance of 200 feet or inappropriately loud.

►The location of the horn switch interferes with other controls or is not located on the steering wheel.

INTAKE AND FUEL SYSTEM (Line 7)

Since gasoline is very flammable, it is imperative that the system have no leaks.

Fail if:

►Any part of the system is not securely and permanently fastened.

►There is fuel leakage at any point in the system.

►The fuel tank filler cap is missing or does not fit properly.

Warn if:

►A hose is worn or cracked to an extent that it appears that leakage is imminent.

LAMPS & REFLECTORS (Lines 10-15)

All lamps and reflectors shall conform to the location and color specified in Federal Motor Vehicle Safety Standard 108. Note: All FMVSS can be viewed at web site: http://www.gpo.gov/fdsys/pkg/CFR-1998-title49-vol5/xml/CFR-1998-title49-vol5-part571.xml. See Tables I-a and I-b on Pages 8-15.

Background information for inspectors:

Some lamps must illuminate to a degree that they are functional in both daylight and nighttime. Examples are turn signals, stop lamps and hazard warning flashers. Other lamps must be able to meet the nighttime sight distance criteria of local ordinances. Examples are taillights, side marker lights and headlights.

Backup Lamps: Vehicles manufactured on and after 1/1/69 were equipped with one or more backup lights, but the four County ordinances do not mandate them. If a vehicle has a backup light, it must be white and be able to illuminate only in reverse gear.

Hazard Warning Lamps: Vehicles manufactured after 1/1/69 had these installed. Hazard lamps must flash simultaneously and function independent of the ignition. Hazard lamps will not flash when the service brake is applied.

Parking Lamps: All vehicles manufactured after 1/1/69 were manufactured with amber parking lamps. Earlier model vehicles had either white or amber.

Rear License Plate Light: Rear registration plates must have a white light, which will make the plate visible from 50 feet away from the plate.

Side Marker Lamps: Vehicles manufactured since 1/1/69 have side marker lamps and side marker reflectors. Side markers are illuminated whenever the headlamps or parking lamps are illuminated.

Stop Lamps (Line 11): All vehicles manufactured since 1/1/69 were equipped with at least two red stop lamps. Each passenger car manufactured on or after 9/1/85, and each multipurpose passenger vehicle, truck, and bus, with an overall width less than 80 inches, a GVWR of 10,000 pounds or less, manufactured on or after 9/1/93, was equipped with a high-mounted stop lamp.

Tail Lamps (Line 13): Most vehicles manufactured since 1950 have two red tail lamps. Earlier models have only one.

Turn Signals (inside and out): Vehicles manufactured since 1/1/68 are required to have turn signals. All steering column mounted turn signal switches are self-canceling. Most vehicles manufactured after 1950 had self-canceling turn signals.

Fail if:

►Missing

►Damaged so that light shows through the damaged portion of the lens (placing tape over the damaged portion of the lens is not adequate to pass the inspection but gluing that restores proper function is adequate) or moisture is present inside the lens

►Not properly installed, or directs light improperly (this could be caused by vehicle body damage that causes a properly installed lamp or reflector to improperly direct light).

►Not of an approved type or color (See Tables on Pages 8-15 and Hawaii Administrative Rules 19-132)

►Obscured or blocked in any manner or is covered with material that is transparent or non-transparent and which diminishes the function of the lamp, lens or reflector so as to put it out of conformance with FMVSS and local laws, ordinances or rules (If modified, the burden of proof of conformance is on the vehicle owner). If a lamp or reflector that is not required is installed, it must not diminish the effectiveness of any required lamp or reflector. A rear window with aftermarket tinting must not have tint over the portion through which the high mounted stop light shines. If that portion is tinted, it is considered an obstruction, because it puts the lamp out of conformance with FMVSS. This requirement is for 2013 model vehicles and later only.

►Inoperable, or operates improperly.

►The reverse light stays on in any gear position other than reverse.

►Headlamps (Line 10) do not have reasonably equal candlepower or cannot produce a light sufficient to reveal any person or object straight ahead for a distance of 200 feet.

►Headlamps are not properly aimed (Instructions for using the aiming device must be available to inspectors at the inspection station).

►Turn signal (Line 12) or hazard warning lamp (Line 14) flashing rate is less than 60 per minute or more than 120.

►Turn signal self-canceling device does not operate.

►Side marker lamps do not illuminate when the headlamps or parking lights are turned on.

►The high beam indicator lamp, or any other safety oriented indicator lamp is inoperative.

►Headlight height (measured to the headlamp center from road surface) is lower than 22 inches or higher than 54 inches (§291-25, HRS).

►Reflector height is lower than 15 inches or higher than 60 inches. Note: Sec. 15-19.3 of the Honolulu ordinances requires reflectors to be mounted on the motor vehicle at a height not less than 24 inches or more than 60 inches above the ground. However, Federal standards allow a minimum of 15 inches for the following: tail lamps, stop lamps, parking lamps, reflectors, backup lamp, turn signal lamps, side marker lamps, intermediate side marker lamps and intermediate side marker reflectors. If any of these items is less than the County requirement but

within the Federal requirement, the vehicle should not be failed unless the vehicle was modified in a manner that reduced the height below a County requirement.

Note: Modified for English units of measurement. Refer to Federal Register Vol. 72, No. 232, Dec. 4, 2007, (specifically 72 FR 68234) for references.

Table I.-a—Required Lamps and Reflective Devices

Lighting device	Number and color	Mounting location	Mounting height	Device activation
All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses				
Lower Beam Headlamps	White, of a head-lighting system listed in Table II.	On the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable.	Not less than 22.01 inches nor more than 54.02 inches. The wiring harness or connector assembly of each head-lighting system must be designed so that only those light sources intended for meeting lower beam photometrics are energized when the beam selector switch is in the lower beam position, and that only those light sources intended for meeting upper beam photometrics are energized when the beam selector switch is in the upper beam position, except for certain systems listed in Table II. Steady burning, except that may be flashed for signaling purposes.	
Upper Beam Headlamps	White, of a head-lighting system listed in Table II	On the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 22.01 inches nor more than 54.02 inches.	
Turn Signal Lamps	2 Amber	At or near the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable.	Not less than 15 inches, nor more than 83 inches.	Flash when the turn signal flasher is actuated by the turn signal operating unit.
	2 Amber or red Truck tractor exception, see S6.1.1.3	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable		
Tail-lamps	2 Red	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.	Steady burning. Must be activated when the headlamps are activated in a steady burning state or the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.

				May be activated when the headlamps are activated at less than full intensity as Daytime Running Lamps (DRL).
Stop Lamps	2 Red	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing.
				May also be activated by a device designed to retard the motion of the vehicle.
Side Marker Lamps	2 Amber	On each side as far to the front as practicable.	Not less than 15 inches.	Steady burning except may be flashed for signaling purposes. Must be activated when the headlamps are activated in a steady burning state or the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.
	2 Red (not required on truck tractor).	On each side as far to the rear as practicable.		
Reflex Reflectors	On each side as far to the front as practicable.	2 Amber	Not less than 15 inches, nor more than 60 inches	Not applicable.
	2 Red (not required on truck tractor)	On each side as far to the rear as practicable		
	2 Red	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable. On a truck tractor may be mounted on the back of the cab not less than 4 inches above the height of the rear tires.		
Backup Lamp	1 White. Additional lamps permitted to meet requirements.	On the rear.	No requirement.	Steady burning. Must be activated when the ignition switch is energized and reverse gear is engaged. Must not be energized when the vehicle is in forward motion.
License Plate Lamp	1 White. Additional lamps permitted to meet requirements.	On the rear to illuminate license plate from top or sides.	No requirement.	Steady burning. Must be activated when the headlamps are activated in a steady burning state or when the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.

Additional Lamps Required on All Passenger Cars, and on Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, Less Than 80 Inches in Overall Width				
Parking lamps	2 Amber or white.	On the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.	Steady burning. Must be activated when the headlamps are activated in a steady burning state.
Additional Lamp(s) Required on All Passenger Cars, and on Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, Less Than 80 Inches in Overall Width and With a GVWR of 10,000 LBS or Less				
High mounted stop lamp	1 Red, or 2 red where exceptions apply. See Section 6.1.1.2.	On the rear including glazing, with the lamp center on the vertical centerline as viewed from the rear.	Not less than 34 inches except for passenger cars. See Section 6.1.4.1.	Steady burning. Must only be activated upon application of the service brakes or by a device designed to retard the motion of the vehicle.
Additional Lamps and Reflective Devices Required on All Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses, 30 Feet or Longer				
Intermediate side marker lamps	2 Amber	On each side located at or near the midpoint between the front and rear side marker lamps.	Not less than 15 inches.	Steady burning except may be flashed for signaling purposes. Must be activated when the headlamps are activated in a steady burning state or when the parking lamps on passenger cars and MPVs, trucks, and buses less than 80 inches in overall width are activated.
Intermediate side reflex reflectors	2 Amber	On each side located at or near the midpoint between the front and rear side reflex reflectors.	Not less than 15 inches, nor more than 60 inches.	Not applicable.
Additional Lamps Required on All Multipurpose Passenger Vehicles (MPV), Truck, and Buses, 80 Inches or More in Overall Width				
Clearance lamps	2 Amber	On the front to indicate the overall width of the vehicle, or width of cab on truck tractor, at the same height, symmetrically about the vertical centerline.	As near the top as practicable.	Steady burning.
		May be located at a location other than the front if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle.		
	2 Red (not required on truck tractor)	On the rear to indicate the overall width of the vehicle, at the same height, symmetrically about the vertical centerline. May be located at a location other than the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle.	As near the top as practicable, except where the rear identification lamps are mounted at the extreme height of the vehicle. Practicability of locating lamps on the vehicle header is presumed when the header extends at least approximately 1 inch above the rear doors.	Steady burning.
Additional Lamps Required on All Multipurpose Passenger Vehicles (MPV), Truck, and Buses, 80 Inches or More in Overall				

Width				
Identification lamps	3 Amber	On the front, at the same height, as close as practicable to the vertical centerline, with lamp centers spaced not less than 6 inches or more than 12 inches apart.	As near the top of the vehicle or top of the cab as practicable.	Steady burning.
	3 Red (not required on truck tractor).	On the rear, at the same height, as close as practicable to the vertical centerline, with lamp centers spaced not less than 6 inches or more than 12 inches apart.	As near the top as practicable. Practicability of locating lamps on the vehicle header is presumed when the header extends at least approximately 1 inch above the rear doors.	Steady burning.
Additional Lamps Required on All School Buses Except Multifunction School Activity Buses				
Signal warning lamps	2 Red plus 2 amber optional	On the front of the cab as far apart as practicable, but in no case shall the spacing between lamps be less than 40 inches. Amber lamps, when installed, at the same height as and just inboard of the red lamp.	As high as practicable but at least above the windshield.	Flashing alternately between 60 to 120 cycles per minute, with an activation period sufficient to allow the lamp to reach full brightness, when actuated by a manual switch. Amber lamps, when installed, may only be activated by manual or foot operation, and must be automatically deactivated and the red lamps must be automatically activated when the bus entrance door is opened.
	2 Red plus 2 amber optional	On the rear cab as far apart as practicable, but in no case shall the spacing between lamps be less than 40 inches. Amber lamps, when installed, at the same height as and just inboard of the red lamp.	As high as practicable but at least above the top of any side window opening.	Flashing alternately between 60 to 120 cycles per minute, with an activation period sufficient to allow the lamp to reach full brightness, when actuated by a manual switch. Amber lamps, when installed, may only be activated by manual or foot operation, and must be automatically deactivated and the red lamps must be automatically activated when the bus entrance door is opened.
Daytime Running Lamps Permitted But Not Required on Passenger Cars, Multipurpose Passenger Vehicles (MPV), Trucks, and Buses				
Daytime running lamp (DRL)	2 identically colored either white, white to yellow, white to selective yellow, selective yellow, or yellow	On the front, symmetrically disposed about the vertical centerline if not a pair of lamps required by this standard or if not optically combined with a pair of lamps required by this standard.	Not more than 42 inches above the road surface if not a pair of lamps required by this standard or if not optically combined with a pair of lamps required by this standard. See S7.10.13(b) for additional height limitation.	Steady burning. Automatically activated as determined by the vehicle manufacturer and automatically deactivated when the headlamp control is in any "on" position. Each DRL optically combined with a turn signal lamp must be automatically deactivated as a DRL when the turn signal lamp or hazard warning lamp is activated, and automatically reactivated as a DRL when the turn signal lamp or hazard warning lamp is deactivated.
				See S7.10.10.1(c) for additional activation requirements when mounted close to, or combined with, a

				turn signal lamp.

Table I-b.—Required Lamps and Reflective Devices

Lighting device	Number and color	Mounting location	Mounting height	Device activation
		All Trailers		
Turn Signal Lamps	2 Red or amber	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 15 inches, nor more than 83 inches	Flash when the turn signal flasher is actuated by the turn signal operating unit.
Tail-lamps	2 Red or 1 red on trailers less than 30 inches wide	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable. When a single lamp is installed it must be mounted at or near the vertical centerline	Not less than 15 inches, nor more than 72 inches	Steady burning.
Stop Lamps	2 Red, or 1 red on trailers less than 30 inches wide	On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable. When a single lamp is installed it must be mounted at or near the vertical centerline	Not less than 15 inches, nor more than 72 inches	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing. May also be activated by a device designed to retard the motion of the vehicle.
Side Marker Lamps	2 Amber. None required on trailers less than approximately 6 ft in overall length including the trailer tongue.	On each side as far to the front as practicable exclusive of the trailer tongue.	Not less than 15 inches.	Steady burning except may be flashed for signaling purposes.
	2 Red	On each side as far to the rear as practicable	Not less than 15 inches. Not more than 60 inches on trailers 80 inches or more in overall width	
Reflex Reflectors. A trailer equipped with a conspicuity treatment in conformance with S8.2 of this standard need not be equipped with reflex reflectors if the conspicuity material is placed at the locations of the required reflex reflectors	2 Amber. None required on trailers less than approximately 6 ft in overall length including the trailer tongue.2 Red 2 Red or 1 red on trailers less than 30 inches wide	On each side as far to the front as practicable exclusive of the trailer tongue. On each side as far to the rear as practicable. On the rear, at the same height, symmetrically about the vertical centerline, as far apart as practicable. When a single reflector is installed it must be mounted at or near the vertical centerline	Not less than 15 inches, nor more than 60 inches	Not applicable.
License Plate Lamp	1 White Additional lamps permitted to	On the rear to illuminate license plate from top or sides	No requirement	Steady burning.

	meet requirements			
Additional Lamps and Reflective Devices Required on all Trailers 30 Feet or Longer				
Intermediate side marker lamps	2 Amber	On each side located at or near the midpoint between the front and rear side marker lamps	Not less than 15 inches	Steady burning except may be flashed for signaling purposes.
Intermediate side reflex reflectors. A trailer equipped with a conspicuity treatment in conformance with S8.2 of this standard need not be equipped with reflex reflectors if the conspicuity material is placed at the locations of the required reflex reflectors	2 Amber	On each side located at or near the midpoint between the front and rear side reflex reflectors	Not less than 15 inches, nor more than 60 inches	Not applicable.
Additional Lamps Required on all Trailers 80 Inches or More in Overall Width				
Clearance lamps	2 Amber	On the front to indicate the overall width of the vehicle, at the same height, symmetrically about the vertical centerline May be located at a location other than the front if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle	As near the top as practicable	Steady burning.
	2 Red	On the rear to indicate the overall width of the vehicle, at the same height, symmetrically about the vertical centerline May be located at a location other than the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle	As near the top as practicable, except where the rear identification lamps are mounted at the extreme height of the vehicle. Practicability of locating lamps on the vehicle header is presumed when the header extends at least approximately1 inch above the rear doors	Steady burning.
Identification Lamps	2 Amber to front and red to rear	On a boat trailer the requirement for front and rear clearance lamps may be met by installation at or near the midpoint on each side of a dual facing lamp so as to indicate the extreme width. May be located at a location other than the front and the rear if necessary to indicate the overall width of the vehicle, or for protection from damage during normal operation of the vehicle	As near the top as practicable	Steady burning.
	3 Red	On the rear, at the same height, as close as practicable to the vertical centerline, with lamp centers spaced not less than 6 inches or more than 12 inches apart	As near the top as practicable. Practicability of locating lamps on the vehicle header is presumed when the	Steady burning.

			header extends at least approximately 1 inch above the rear doors	

Table I-c.—Required Lamps and Reflective Devices

Lighting device	Number and color	Mounting location	Mounting height	Device activation
All Motorcycles				
Lower Beam Headlamps	White, of a head-lighting system listed in S10.17	On the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable. See additional requirements in S6.1.4.2.1.3, S10.17.1.1, S10.17.1.2, and S10.17.1.3.	Not less than 22.01 inches nor more than 54.02 inches	The wiring harness or connector assembly of each head-lighting system must be designed so that only those light sources intended for meeting lower beam photometrics are energized when the beam selector switch is in the lower beam position, and that only those light sources intended for meeting upper beam photometrics are energized when the beam selector switch is in the upper beam position, except for certain systems listed in Table II. Steady burning, except that may be flashed for signaling purposes. The upper beam or the lower beam, but not both, may be wired to modulate from a higher intensity to a lower intensity in accordance with S10.17.5.
Upper Beam Headlamps	White, of a head-lighting system listed in S10.17	On the front, at the same height, symmetrically about the vertical centerline, as far apart as practicable	Not less than 22.01 inches nor more than 54.02 inches.	
Turn Signal Lamps	2 Amber. None required on a motor driven cycle whose speed attainable in 1 mile is 30 mph or less.	At or near the front, at the same height, symmetrically about the vertical centerline, and having a minimum horizontal separation distance (centerline of lamps) of 16 inches. Minimum edge to edge separation distance between a turn signal lamp and headlamp is 4 inches.	Not less than 15 inches, nor more than 83 inches.	Flash when the turn signal flasher is actuated by the turn signal operating unit.
	2 Amber or red. None required on a motor driven cycle whose speed attainable in 1 mile is 30 mph or less.	At or near the rear, at the same height, symmetrically about the vertical centerline, and having a minimum horizontal separation distance (centerline to centerline of lamps) of 9 inches.		
		Minimum edge to edge separation distance the turn signal lamp and the tail-lamp or stop lamp is 4 inches, when a single stop and tail-lamp is installed on the vertical centerline and the turn signal lamps are red.		
Tail-lamps	1 Red	On the rear, on the vertical centerline except that if two are used, they must be	Not less than 15 inches, nor more	Steady burning. Must be activated when the headlamps are activated in a steady burning state.

		symmetrically disposed about the vertical centerline.	than 72 inches.	
Stop Lamps	1 Red	On the rear, on the vertical centerline except that if two are used, they must be symmetrically disposed about the vertical centerline.	Not less than 15 inches, nor more than 72 inches.	Steady burning. Must be activated upon application of the service brakes. When optically combined with a turn signal lamp, the circuit must be such that the stop signal cannot be activated if the turn signal lamp is flashing. May also be activated by a device designed to retard the motion of the vehicle.
Reflex Reflectors	2 Amber	On each side as far to the front as practicable.	Not less than 15 inches, nor more than 60 inches.	Not applicable.
	2 Red	On each side as far to the rear as practicable		
	1 Red	On the rear, on the vertical centerline except that, if two are used on the rear, they must be symmetrically disposed about the vertical centerline		
License Plate Lamp	1 White. Additional lamps permitted to meet requirements.	On the rear to illuminate license plate.	No requirement.	Steady burning. Must be activated when the headlamps are activated in a steady burning state.

MIRRORS (Line 21)

Honolulu County Ordinance 15-19.29 requires one or more mirrors so located as to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear. Motor vehicle manufacturers typically install three mirrors so traffic can be seen to the rear on each side of the vehicle as well as behind it. Having two outside mirrors allows good rear vision even when a vehicle is full of occupants or cargo that blocks vision through the inside mirror. If a car was certified by its manufacturer to be in compliance with FMVSS with two or three mirrors the vehicle must have two or three mirrors to pass inspection, because the inspection rules are designed to preserve any safety standard installed in a vehicle. FMVSS 111, Rear View Mirrors, does not apply to cars manufactured before 1-1-68. Vehicles built on a truck chassis are not required to have an inside mirror, but they must have an outside mirror on each side as of 2/26/77. Inspect for location, field of view, condition, mounting, ease and stability of adjustment, and exposed sharp edges. If an inside mirror is in the head impact area, the mounting must be able to deflect, collapse or break away without leaving sharp edges when the reflective surface of the mirror is impacted.

Fail if:

- ►Field of view is inadequate for viewing traffic behind the vehicle at least 200 feet.
- ►A required mirror is missing.
- ►A mirror is not securely mounted.
- ►A mirror does not hold adjustment.
- ►A mirror is damaged so as to have exposed sharp edges or poor reflectivity.
- ►Inside mirror is not designed to reduce the likelihood of injury on impact.

NEIGHBORHOOD ELECTRIC VEHICLES (NEV's) (Line 33)

In general, NEV's and other electric vehicles are inspected the same way as other vehicles. The following items are required on NEV's.

(1) A FMVSS Certification label with a 17 character VIN. FMVSS 500 requires NEVs to be manufactured so that they will not go faster than 25 mph.

(2) Four wheels in contact with the ground.

(3) 2 Headlamps

(4) 2 Tail lamps

(5) Turn signal lamps

(6) 2 Stop lamps

(7) A red reflector on each side near the rear of the vehicle

(8) One red reflector on the rear of the vehicle

(9) A windshield

(10) A parking brake

(11) A Type 1 or Type 2 seat belt assembly for each seating position.

The following items need special attention in addition to the requirements for fossil fuel vehicles when inspecting a NEV.

Intake & Fuel System (Line 7): Although an electric vehicle has no intake system, it does have a fuel system of batteries which must not leak or have excessive corrosion on the terminals. The batteries must be secure, the terminal connections tight and cell caps in place. Batteries must also be separated from occupants and be vented.

Headlamp High beams are not required for neighborhood electric vehicles.

Hazard warning lamps (Line 14): It is not a federal or state requirement for NEV's to have hazard warning lamps. If a NEV has inoperable warning lamps, warn the owner but do not fail the vehicle.

Turn signals and tail lamps (Lines 12 & 13) are required and must be inspected.

Reflex reflectors (Line 15): NEV's are required to have a red reflector on each side near the rear of the vehicle and one red in the rear. Yellow reflectors on the front and forward sides are not required. Neither a front nor a rear side marker lamp is required.

Window Tint (Line 17): Tint inspection will usually not be made on these vehicles, because they typically have only a windshield. Light transmittance of a strip of tint above the AS-1 or AS-5 mark near the top of the windshield need not be measured. Should a later model NEV have windows in addition to the windshield, they must comply with tint requirements of 291-21.5, HRS.

Windshield (Line 18): A NEV may have either an AS-1 or AS-5 windshield.

Windshield wipers (Line 20): These are not required on NEVs but most manufacturers install them. Inspect them if they are installed, but only advise the owner if they fail.

Rear View Mirrors (Line 21): NEVs are required to have an exterior mirror on the driver's side and either an interior rear view mirror in the middle or an exterior mirror on the passenger side.

Door Latches (Line 23): NEVs have no doors.

Hood Latches (Line 24): NEVs usually do not have forward opening hood or trunk lids. Some models have latches on the front "hood", which covers the motor and two batteries. Some earlier models have screws that hold this cover in place. Neither of these is forward opening.

Seat belts (Line 25): NEVs must have either Type 1 or Type 2 seat belts. A Type 1 seat belt assembly is a lap belt for pelvic restraint. A Type 2 seat belt is a combination of pelvic and upper torso restraints.

Bumpers (Line 27): NEVs are not required to have a bumper. If a bumper is installed, it must not have a feature that can be a hazard for a hit pedestrian.

Speedometer and Odometer (Line 30): NEVs are not required to have either a speedometer or odometer, but some manufactures install both as standard equipment. When they are present, the ignition usually must be turned on to read the speedometer. The meter alternates between showing the vehicle speed and the percent of battery charge. When the ignition is turned off, the odometer will be displayed briefly. If a NEV has an odometer, record the mileage on the inspection form; if there is no odometer, leave the mileage boxes on the form blank.

Triangular Slow Moving Vehicle Emblem and NEV Restriction Sign (Line 33): NEVs are required by 291C-130, HRS to have a slow moving vehicle emblem displayed at the rear. The emblem must be 14 inches high and 16 inches wide, mounted with the base down and at a height of not less than three or more than five feet from the ground to base. NEVs must also have a permanently attached or painted sign that is visible to the driver stating that the vehicle must not be driven on roads with a speed limit greater than 35 mph and that the NEV may not travel faster than 25 mph.

OCCUPANT PROTECTION (Line 25, seats, belts and bags)

Vehicles must have occupant protection in conformance with 291-11.6, HRS, which references the FMVSS. FMVSS 208 required manufacturers to install occupant protection in new cars as of 1-1-68.

Fail if:

▶The seat belt assemblies are not securely anchored, or the original anchorage position has been relocated, altered or modified.

▶Any seat belt webbing is seriously deteriorated or frayed.

▶A seat belt buckle does not function properly.

▶A seat belt assembly is missing in vehicles that are required by law to have that assembly.

▶The seat belts are not an approved type or parts are missing from the seat belt assembly.

▶Frontal air bags are not operative as indicated by the readiness indicator of the deployment system. A telltale does not emit light except when identifying the malfunction or vehicle condition for which indication it is designed or during a bulb check upon turning on the ignition.

RECONSTRUCTED VEHICLES (Line 31)

Only the City & County of Honolulu has a reconstructed vehicle inspection program. A vehicle is considered a reconstructed vehicle subject to the reconstructed vehicle inspection law if any of the following conditions exist.

1. The original engine is relocated in the vehicle or is replaced with an engine that is not an original replacement equipment part (OREP) engine.
2. The carburetor, fuel injection system, air intake system, intake manifolds, or fuel tank of the original system is replaced with other than OREP components.
3. The original transmission is relocated in the vehicle or is replaced with a transmission that is not OREP equipment.
4. The original suspension system components (springs, torsion bars, shock absorbers, sway bars, etc.) are:
   (A) Replaced with other than OREP components; or
   (B) Adjusted, or equipped with added components, to change the height of the vehicle frame, as measured from the axle to frame.
5. The original vehicle body is:

(A) Replaced with a body that is other than an OEM body;
(B) Modified by replacing the hood, fenders, doors, or other body assemblies with other than OREP components;
(C) Modified by the removal of significant portions of the hood, fenders, doors, or other body assemblies;
(D) Modified by changing the size of the windshield, or by changing the size of any window or window opening;
(E) Modified by changing the location of the driver's seating position within the vehicle which requires modification of the vehicle's floor pan; or
(F) Modified by additions to the hood, fenders, doors, or other body assemblies which significantly change the appearance or function of the body component.

6. The original vehicle frame, or any chassis structural assembly used as a frame is changed or modified in any manner.
7. An original axle, or assembly which functions as an axle is:
   (A) Replaced with other than an OREP axle;
   (B) Relocated to a different position with respect to the vehicle frame; or
   (C) Modified to a different configuration or dimension.
8. Any original steering system component is:
   (A) Replaced with other than an OREP component; or
   (B) Modified or relocated in any manner.
9. The original head lamps, tail lamps, marker lamps, signal lamps, or exterior reflectors are:
   (A) Replaced with other than OREP components; or
   (B) Relocated in a manner that significantly changes the appearance of the vehicle.
10. Any original service brake system or parking brake system component is:
    (A) Replaced with other than OREP components;
    (B) Modified in any manner except for the installation of OEM or OREP manufactured for that vehicle; or
    (C) Relocated in any manner.

Fail if:

►If vehicle lacks required recon permit and sticker or the modifications do not match those listed on the certificate.

REGISTRATION (Line 22)

Registration Certificate

►The VIN on the vehicle certification plate must match the VIN on the vehicle registration certificate. (Some reconstructed vehicles, special interest vehicles and motorcycles may not have a certification plate. In these instances check the VIN on the vehicle.)

►License plate & decal numbers must match the numbers on the registration certificate.

Hawaii Insurance Identification Card (Line 32)

►Insurance must be in effect at the time of inspection. If the vehicle is part of a fleet or the vehicle is self-insured, the name on the fleet insurance card or self-insurance certificate must match the name on the registration. Accept only original Insurance ID cards. Before a card is approved by the insurance commissioner, it must have features such as a watermark and a glossy clear coat finish that make it difficult to counterfeit. Don't accept a card that looks home-made using a typewriter or computer and plain card or paper stock.

Vehicle Identification Number (VIN) must match:

►The VIN on the insurance card

►The VIN on the vehicle

►The VIN on the registration certificate

Plates

►Vehicles must have two plates (249-7 (b), HRS), unless registered out-of-state in a location requiring only one plate

►Plates must be secured and legible

SEATS (Line 25)

Fail if:

►The seats are not securely fastened to the floor.

►The driver's seat adjusting mechanism slips out of the set position when the seat is pushed forward or backward.

SPEEDOMETER-ODOMETER (Line 30)

Record the odometer reading on the form. If it is in kilometers, make a note of this on the form. The registration office will convert it when entering the information in the City computer.

Fail if:

►Speedometer does not read in miles per hour, provided the vehicle is less than 25 years old. There is no federal, state or local requirement for a speedometer to be installed in a motor vehicle, but if one is installed, FMVSS require it to read in miles per hour. The speedometer does not need to operate. FMVSS are effective for only a 25-year period, so if a vehicle with a speedometer is older than 25 years, it does not need to read in mph.

►A comparison of the current mileage and what is on the old form indicates that the odometer is not working, or the odometer does not record distance when the wheel to which the odometer is connected is rotated.

STEERING SYSTEMS (Line 1)

►Fail the steering if the rack and pinion it is leaking badly at the boots or you notice damage, ware or loose parts that can adversely affect steering.

►Steering linkages or tie rod ends appear to be excessively worn, loose or damaged.

Steering Wheel Play (With Engine Running)

Fail if:

►Steering wheel maximum play (lash) exceeds: 2 inches for power steering; 3 inches for manual steering. Vehicles with electronic steering may not have any play.

►Steering wheel does not turn freely full left and right. (This is a good time to be sure the turn signal canceling mechanism works.)

►Wheel and column can be moved as a unit.

Under the hood steering components

Fail if:

►A hose is leaking or the reservoir is below the minimum level.

►Power steering belt is badly worn or has improper tension (greater than 1/2 inch movement with about 10 pounds of thumb pressure between two pulleys).

►The pump mounting is loose.

SUSPENSION SYSTEMS (Line 3)

A vehicle should look level when it is on a level surface. Push down on a corner and see if the vehicle moves downward.

Fail if:

►The vehicle cannot be pushed down.

With vehicle raised, visually check for broken leaf springs, coil springs, air springs (***Caution***: If air suspension vehicles are hoisted via the body support area, make sure that the air suspension switch is "off" to avoid damaging the air spring), torsion bar or shock absorber damage. Also check that shackles, bushings, spring clips and U-bolts are securely mounted and undamaged.

►Coil springs must not be extended by spacers or blocks, shortened, or insecurely mounted.

►Shock absorbers must be installed and must not have severe fluid leaks (slight dampness is ok) or loose or broken mountings.

►Any tire or other moving part rubs a stationary portion of the vehicle.

TIRES (Line 4)

All tires used on public roads must conform to Federal Motor Vehicle Safety Standards. Air pressure and general condition should be checked at least once a month. Motorists often neglect this. Advise owner if the tire pressure does not match the motor vehicle manufacturer's recommendations. The load capacity of tires must be the same or higher than one half of the GAWR (gross axle weight rating) as shown on the certification label.

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's recommendations including: tire size, tire inflation pressure, GVWR (gross vehicle weight rating) and GAWR. Placards and certification labels are permanently attached to the vehicle door edge, door post, glove-box door or inside of the trunk lid.

Fail if:

►Less than 2/32 inch treads remains when measured in any two adjacent major grooves or the tread wear indicators in any two adjacent major grooves contact the road in any three locations spaced equally around the tire. Tread wear indicators become flush with the road surface when the tread depth is 2/32 inch. Motorcycles and mopeds have a 1/32-inch limit. Proper tread depth is especially important on wet road surfaces, because the space between the treads is where the water is pushed when the tread pushes through the water and makes contact with the road.

►There are bumps, bulges, cuts, knots indicating partial failure or structure separation, cracks in excess of one inch in any direction and deep enough to expose the cords, or tire is regrooved, unless tire is marked "Regroovable" on the sidewall.

►There are tires of different sizes or types (bias/radial) mix mounted on the same axle.

►A tire on an axle has a load capacity that is less than one half of the GAWR shown on the vehicle certification label, or can rub or touch other parts of the vehicle when rotated.

►A tire does not display the "DOT" symbol on the sidewall, is marked "For Farm Use Only", "Off-Highway Use only", "For Racing Use only", or other inappropriate restrictive use.

►A tire is not marked with the standard automotive size designation, does not have highway-type design treads, or the tire tread is equipped with metal studs.

►A tire has severe sidewall cracking that exposes chord fabric; a tire with severe sidewall cracking should be failed even without chord exposure, if it is over 10 years of age.

Supplementary Information about Tires:

The **US DOT Identification number** begins with the letters "DOT" which indicate that the tire complies with all applicable federal standards. The next two or three characters are the plant code where the tire was manufactured. The remaining characters are marketing codes used at the manufacturer's discretion. They are used to contact consumers if a tire defect requires a recall. The last four numbers represent the week and year the tire was built. For example, the numbers 3102 mean the 31st week of 2002. Although some tire manufacturers used two digits to indicate the year of manufacture prior to the year 2000, they were required only to use one number to indicate the year of the decade in which the tire was made. For instance, the numbers 079 mean the seventh week in the ninth year of a decade. This system did not confirm which decade is referenced, because it was assumed that no tire would be in service for more than ten years. While the entire Tire Identification Number is required to be branded onto one sidewall of every tire, current rules also require that the first digits of the Tire Identification Number (everything but the week and year) must also be branded onto the opposite sidewall. Therefore, it is possible to see a Tire Identification Number that appears incomplete. When this happens look at the other sidewall to find the entire Tire Identification Number. The date of manufacture is important, because it is possible for a tire to "age-out" before it wears out – especially on vehicles that are not used regularly and are exposed to sunlight and ozones.

Tire aging and degradation are commonly evidenced by the development of many small cracks on the side wall. Tire aging refers to the reduction or loss in a tire's material properties that leads to a reduction in performance capabilities. Ultraviolet rays and ozones hasten the development of these cracks. The cracks do not affect performance, provided they do not expose any chord fabric. However, there are other concurrent degradations taking place. Degradation due to cumulative exposure to heat (especially due to under inflation) and oxygen is accelerated with higher temperatures and is a contributing factor for tire failures, such as tread separations. It is difficult to determine when a tire has aged-out, because aging takes place both from the outside inward and from the inside outward. The British Rubber Manufacturers Association and the Japan Automobile Tire Manufacturers Association recommend that all tires (including spare tires) that are more than ten years old be put out of service. In 2005, DaimlerChrysler and Ford Motor Company began recommending replacement of tires installed as original equipment after six years of service. In Hawaii's inspection program, tires that are over ten years old and have severe sidewall cracking even without chord exposure should fail the inspection.

Tires for light trucks have other markings besides those found of passenger car tires. **Max. Load Dual __kg (lbs) at __kPa (psi) Cold** indicates requirements when the tire is used in conjunction with another tire as a duel. **Max. Load Single __kg (lbs) at __kPa (psi) Cold** indicates requirements when the tire is used as a single.

Load Range identifies the tire's load-carrying capabilities and inflation limits.

TRAILERS:

Inspection of trailers with a gross weight of 3,000 pounds and less. These trailers must have appropriately colored:

(1) Two rear reflectors, one on right and one on left

(2) If the towing vehicle stop light is blocked, the trailer must have a stop light.

(3) Light illuminating license plate (291-31, HRS)

(4) Fenders, covers or devices, including flaps or splash aprons, or unless the body of the vehicle or attachments thereto afford adequate protection to effectively minimize the spray or splash of water or mud to the rear of the vehicle

(5) Safety chain or cable and its accompanying coupling and mounting devices with an ultimate strength equal at least to the gross weight of the trailer

Inspection of trailers with a gross weight greater than 3,000 lbs. A trailer's weight influences what items need to be inspected. Trailers and semi-trailers with a gross weight in excess 3,000 pounds are required to have appropriately colored:

(1) Two front clearance lamps, one on each side (24 to 60 inches high, unless the trailer is less than 24 inches high)

(2) Two side marker lamps on each side (front & rear); in darkness, they must be visible 200 feet from vehicle

(3) Two rear clearance lamps, one on each side

(4) Two side reflectors on each side (front & rear): in darkness they must be visible 50 to 300 feet at night with upper beam headlamps shining on them

(5) Two rear reflectors on each side

(6) At least one stoplight visible night or day for 100 feet

(7) Light illuminating license plate (291-31, HRS)

(8) Brakes that are actuated from the tow vehicle, and in the event of a breakaway, the brakes must self actuate. Trailer weight must not exceed 50% of tow vehicle weight (County Ordinance 15-19.24(c))

(9) Fenders, covers or devices, including flaps or splash aprons, or unless the body of the vehicle or attachments thereto afford adequate protection to effectively minimize the spray or splash of water or mud to the rear of the vehicle (County Ordinances 15-19.31; 10.20.390; 16-17.30; 24-104)

(10) Safety chain or cable and its accompanying coupling and mounting devices with an ultimate strength equal at least to the gross weight of the trailer

Maximum trailer dimensions:

Maximum Size: Width - 9', including load; Height = 14' including load; Length - 65' including load and towing vehicle

WHEELS (Line 5)

Wheels that are damaged so they are out-of-round or warped can cause vibrations. Missing parts can result in the loss of a wheel.

Fail if:

►Wheel bolts, nuts, studs, or lugs are loose, missing, or damaged.

►A wheel is bent, cracked, repaired by welding or brazing, damaged, mismatched or has elongated or oversize mounting holes.

WINDSHIELD WIPERS AND WASHERS (Line 20)

Fail if:

►Wipers or washers are inoperative; advise motorist if fluid is low. If the fluid reservoir is empty, add water and see if it has a leak. If a leak exists, fail the vehicles.

►Wipers have less than 15 cycles per minute for low speed and less than 40 cycles per minute for high speed. (Cars manufactured on or after 1/1/68 and trucks, MPVs and buses 1/1/69) were made with a high-speed rate of 45 cycles per minute and a low-speed rate of 20 cycles as well as a windshield washer system).

►Severely streak the windshield after five cycles

►Do not completely clear water from wiped area

►Blades are of improper size

►Parts of wiper arms are missing or damaged to the extent that performance is impaired.

Below is a presentation of items for a walk-around, in-vehicle, under-hood and under-vehicle inspection. The intent is to lay out most of the tasks of an inspection and make it easy to remember to inspect everything. Do the inspection in any order.

Front of Vehicle
Front lights for color, marking and damage
Plate – mounting & number match
Bumper, hood, windshield, shade band, mirrors
Push down test of front shock absorbers

Left Side of Vehicle	Right Side of Vehicle
Left front side marker light & reflector – color and damage	Right front side marker light and reflector – color and damage
Left front fender: hazardous damage, covers tire treads	Right front fender must cover tire treads
Left front tire for tread depth & wear pattern, left outside sidewall for damage, size & load capacity, measure tire inflation pressure (in preparation for headlight aim test)	Right front tire - tread depth and wear pattern, right outside sidewall for damage, size & load capacity, measure tire inflation pressure (in preparation for headlight aim test)
Left front wheel - cracks, damage or size modification	Right front wheel - cracks, damage or size modification
Lug nuts (if lugs are visible): none missing, tight	Lug nuts (if lugs are visible): none missing, tight
Left side of windshield & wiper – damage	Right side of windshield and wiper - damage
Left side mirror – damage, stability	Right side mirror – damage, stability
Left Side windows – obstructions, curtains, tint (determine whether light meter will be needed)	Right side windows – obstructions, tint (determine whether light meter will be needed)
Left doors –Damage, primary & secondary latches (By driver's door Check Certification Label for VIN, GAWRs and Tire sizes)	Right door – Damage, primary & secondary latches
Gasoline cap (if on the left side)	Gasoline cap (if on right side)
Left rear fender damage, covers treads	Right rear fender covers treads
Left rear tire for tread depth and wear pattern, left outside sidewall for damage, size & load capacity, measure tire inflation pressure (in preparation for headlight aim test)	Right rear tire for tread depth and wear pattern, right outside sidewall for damage, size & load capacity, measure tire inflation pressure (in preparation for headlight aim test)
Left rear wheel for cracks, damage or size modification	Right rear wheel for cracks, damage or size modification
Lug nuts (if lugs are visible): none missing, tight	Lug nuts (if lugs are visible): none missing, tight
Left rear side marker lights and reflector – color & damage	Right rear side marker light and reflector – color and damage

Rear of Vehicle
Rear lights - proper color, marking and lens damage
Bumper - height, stability, damage; existence of PMVI and recon stickers
Exhaust pipe - modifications and road clearance
License plate - visibility, mounting, numbers match registration
Push down oscillation test of rear shock absorbers
Rear window for illegal obstructions

Open driver's door
Check range of movement, primary & secondary latches
Compare VIN on certification label on door post on driver's side with registration & original insurance card
Compare sizes of tires on car with sizes on label
Compare GAWRs with load capacity of tires on the vehicle

Enter the vehicle and sit in driver's seat
Driver's door window rolls down
Visually check floor pan, seat belts, buckles, headrests
Reach over and check front passenger door primary and secondary latches
Check driver's seat belt assembly and headrest, seat adjustment
Rear view mirrors – condition & visibility
Speedometer reads in mph, record odometer reading
Horn
Starter interlock
Dashboard indicator light check (check engine light, brake failure light, ABS light, oil pressure light, air bag light, high beam indicator, turn signal and emergency flashers, etc.)
Conduct brake vacuum power booster test
Static service brake application test – 10 seconds of pressure
Steering wheel play
Steering wheel movement from peg to peg and turn signal cancel each way
Steering wheel and column movement
Windshield and windows - check for visual obstructions
Windshield wipers and washers – for operation
Defroster fan - operation
Parking brake test
Dynamic brake test
Outside lights for operation (use of mirror system or reflective surfaces makes this possible for one person)
Front hood secondary latch (Pop the hood and secondary latch should catch the hood)

Under the Hood Check
Water leaks – radiator, hoses, reservoir, windshield washer reserve
Belts – for wear and tension
Power steering pump mounting, hoses for leaks, reservoir level if a leak exists
Fuel leaks
Brake fluid leaks by master cylinder and lines
Loose or exposed electrical wires that could spark or short
Battery securely mounted, terminal wires secure
Close hood

Headlight Aim & Tint Measurement

Under the Vehicle **Front**:
Inside sidewalls of tires & tread wear pattern (camber, toe-in)
Leaks by brake cylinders
Front wheels and brake line for brake fluid leaks
Disk brake pad thickness and rotor wear
CV-Boots for damage and leaks
Ball joint boots for damage and leaks
Steering system components for tightness damage and leaks
Suspension system components for damage, loose parts or leaks
Wheel bearing test on at least one wheel of vehicle

Under the Vehicle **Rear**:
Exhaust system for mounting, noise and leaks
Rear wheels and brake line for brake fluid leaks
Disk brake pad thickness and rotor wear
Rear Suspension for missing, damaged, modified or loose components
Inside sidewall of tire and tread wear
Fuel tank for leaks and repairs
Fuel hoses and lines for leaks