

SCHOOL BUS INSPECTION

SCHOOL BUS INSPECTION

HISTORY

School bus safety vehicle inspection programs vary greatly from state to state. Some states have no regulatory inspection program. In others, third-party inspections performed by regulatory agencies range from a biennial detailed, complete inspection by a single inspector or team to annual spot inspections of a limited number of components.

The personnel who conduct inspections have varying degrees of qualifications and experience, which range from technicians and police officers to administrative safety officials.

STATE INSPECTION PROGRAMS

Each responsible party is urged to establish a neutral third-party inspection program. Some states have a system of self-inspection by individual school districts or contractors. While such programs can be effective, with no governmental oversight the effectiveness of the program will likely be scrutinized more thoroughly than programs where governmental oversight exists. Personnel conducting school bus safety inspections must be knowledgeable in the mechanical components of a school bus and be aware of all the applicable construction standards, laws, rules and all other requirements of their jurisdiction. States also should develop specific inspection regulations, rules, procedures and out-of-service criteria for all vehicles utilized in student transportation.

INSPECTION PROCEDURE

School bus safety inspection should consist of a standardized inspection where vehicles are placed out of service based on standardized criteria. Such criteria should not, under any circumstances, exceed the manufacturer's recommendations for component condition, wear level or other tolerance for a particular vehicle. The procedure for individual bus inspections will vary, depending on the number of components to be checked, in accordance with local rules, regulations, number of buses to be inspected, number of inspection personnel available and the types of inspection facilities available (whether equipped with a pit or lift or if inspections are performed on a "creeper").

THE CRITERIA

The purpose of these criteria is to identify critical school bus components and provide rationale that inspectors can utilize to determine if a school bus is safe for student transportation. While it is recognized that each state may have its own list of components to be checked and tolerances for each, these criteria are intended to establish nationwide minimums for inspecting and placing school buses out of service

The inspection items are numerically coded so that a database of the findings can easily be developed. The checklist includes the inspection item and a brief but concise description of the component or condition. If any listed component meets or exceeds the failure criteria specified for that component, then the school bus should not be allowed to transport students until the component is repaired.

It is intended that these criteria will provide a working document for both the Inspector and the Operator's maintenance program, but they are not intended to replace, modify or alter the vehicle manufacturer's recommended specifications.

Inspection methods for the inspection items listed in the "School Bus Recommended Out-of-Service Criteria" are presented in Attachment 3.

School Bus Recommended Out-of-Service Criteria SCHOOL BUS BODY/CHASSIS

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
10.00	BRAKE SYSTEM		
10.01	ADJUSTMENT	a) Any one brake beyond the adjustment limit (see attachment #1)	
10.02	AIR SYSTEM	Fails to maintain pressure when:	
		a) the leakage rate (brakes released) exceeds 2psi/min.	
		b) the leakage rate (brakes applied) exceeds 3psi/min.	
		c) fails to recover air pressure as recommended.	
10.10	BRAKE SYSTEM (hydraulic)		
10.11	MASTER CYLINDER	a) reservoir is below minimum level.	
		b) any leak of fluid in the master cylinder unit or system.	
10.12	PEDAL RESERVE	Fails to maintain manufacturer designed height and travel requiriemetns. (OEM)	
10.13	POWER ASSIST UNIT	Fails to function as designed (OEM)	
10.20	BRAKE COMPONENTS (AIR and HYDRAULIC)		
10.21	BRAKE HOSES/TUBING	a) Brake hose with any damage extending through the outer reinforcement ply.	
		b) Any bulge or swelling when brakes are applied.	
		c) Any restriction due to cracked, broken or crimped line/hose.	
		d) Any line, tubing, hose or connection that is not constructed to meet all applicable manufacturing codes and standards. (OEM)	
10.22	BRAKE SHOE/PAD LINING	a) Any lining/pad worn to the recommended replacement measurement or wear mark.	
		b) Lining pad is broken, not firmly attached to shoe or plate, or is contaminated with oil or grease.	
		c) Fails to make contact with drum (frozen, binding, uneven).	
10.23	BRAKE DRUM/ROTOR	Any drum or rotor that is cracked, improperly mounted, or worn beyond manufacturer's discard specifications. Note: Do not confuse short hairline heat check cracks with flexural cracks.	
10.30	PARKING BRAKE	Not present or working as designed.	
10.40	STEERING SYSTEM	Any modification or other condition that interferes with the free movement of any steering component.	

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
10.41	STEERING COLUMN/ WHEEL	a) Any absence or looseness of U - bolt(s) or positioning part(s).	
		b) Any worn, missing or damaged fastener.	
		c) Steering wheel not properly secured.	
		d) Steering wheel free play fails to meet the performance test. (see attachment #2)	
10.42	FRONT AXLE BEAM	Any crack(s) or obvious welded repair.	
10.43	STEERING GEAR BOX	a) Any mounting bolt(s) loose or missing.	
		b) Any crack(s) in gearbox or mounting brackets.	
		c) Any obvious welded repair.	
10.44	PITMAN ARM	a) Any looseness of the pitman arm on the steering gear output shaft.	
		b) Any obvious welded repair.	
10.45	POWER STEERING	a) Auxiliary power assist cylinder loose.	
		b) Power steering pump inoperable.	
10.46	BALL/SOCKET JOINTS	a) Any movement under steering load of a nut stud.	
		b) Any motion, other than rotational, between any linkage member and its attachment point of more than 1/8 inch measured with hand pressure only.	
		c) Any obvious welded repair.	
10.47	TIE RODS/DRAW LINKS	a) Loose clamp(s) or clamp bolt(s) on tie rod or drag links.	
		b) Any looseness in any threaded joint.	
10.48	NUTS	Loose or missing fasteners on tie rod, pitman arm, drag link, steering arm or tie rod arm.	
10.49	HOSES/FLUIDS	Any faulty fluid control device, leak or empty reservoir.	
10.50	SUSPENSION COMPONENTS		
10.51	AXLE PARTS/MEMBERS	a) Any U-bolt or other spring to axle clamp bolt(s) which are cracked, broken, loose or missing.	
		b) Any spring hanger(s), or other axle positioning parts which are cracked, broken, loose or missing that results in shifting of an axle from its normal position.	
		c) Any worn (beyond manufacturer's specifications) or improperly assembled U bolt, shock, king pin, ball joint, strut, air bag or positioning component(OEM).	
		d) Any spring hanger, assembly part or leaf which is broken or missing.	
		e) Any broken coil spring.	

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
10.60	CHASSIS/FRAME/ UNIBODY		
10.61	FRAME	a) Any cracked, loose, sagging or broken frame side rail.	
		b) Any obvious bend or damage resulting from a collision.	
		c) Any worn or loose mounting hole.	
10.62	CROSS MEMBERS	Any cross member, outrigger or other structural support which is cracked, missing, deformed or has rust holes.	
10.63	OUTRIGGERS/BODY SUOPRT	Any missing, broken, shifted or corroded part that would affect the safe operation of the vehicle.	
10.64	BUMPERS	Any bumper which is missing or not secured.	
10.70	EXHAUST SYSTEM		
10.71	LEAKS	Any part of the exhaust system which is leaking or discharging under the passenger or engine compartment.	
10.80	FUEL SYSTEM		
10.81	FUEL CONTAINER/ CONNECTION	a) Any fuel tank not securely attached to the vehicle.	
		b) Any part of the fuel system not properly secured or fastened.	
		c) Any liquid fuel leak at any point.	
10.90	DRIVESHAFT		
10.91	DRIVE SHAFT GUARD	Loose, missing, improper placement or bent guards.	
10.92	UNIVERSAL JOINT(S)	Worn or faulty, or obviously repair-welded universal joint(s).	
11.00	DIFFERENTIAL		
11.01	HOUSING	Cracked or leaking housing.	
11.10	ENGINE		
11.11	COMPONENTS	Any Critical component that fails to function as designed.	
11.12	LEAKS	Any fluid leaks that would affect the safe operation of the engine.	
11.20	TIRES/WHEELS/HUBS		
11.21	TIRE TREAD DEPTH	Any front tire worn to less than 4/32 inch or any rear tire worn to less than 2/32 inch.	
11.22	TIRE SIDEWALL	a) Any sidewall that is cut, worn or damaged to the extent that the ply cord is exposed.	
		b) Any observable bump, bulge or knot related to sidewall or tread separation.	
11.23	TIRE INFLATION	Tire is flat or has noticeable leak.	
11.24	TIRE TYPE	Not of proper type (load range, size, mismatched, etc.)	
11.25	WHEELS/RIMS/SPIDERS	a) Any nuts, bolts, studs or lugs that are broken, missing, damaged or loose.	
		b) Any wheel/rim that is cracked, improperly seated, damaged, or welded.	

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
11.26	HUB	Excessive wheel bearing or king pin play that exceeds 1/4 inch.	
11.30	aisle		
11.31	CLEARANCE	Aisle does not have the required clearance.	
11.32	OBSTRUCTION	There are objects blocking aisles or exits.	
11.40	ELECTRICAL		
11.41	WIRING	Any required wire or electrical component that is charred or showing evidence of being burnt or exposed.	
11.50	BATTERY		
11.51	CONDITION	a) Battery will not activate the starter.	
		b) Leaking or excess corrosion.	
11.52	WIRES	Wiring is exposed or loose.	
11.53	BATTERY SECUREMENT	Battery not secured.	
11.60	WINDSHIELD WIPERS		
11.61	OPERATION	Wiper fails to work or is missing. Wiper does not clean windshield sweep area.	
11.70	BODY INTERIOR		
11.71	PANELS	Any panel (ceiling, side, wheel well, etc.) protruding, having sharp edges or not secured, that may cause injuries.	
11.72	FLOORS	Floor pan or inner panels that have excessive perforated areas or openings sufficient to cause a hazard to an occupant.	
11.73	STEP WELL	Any part of the step well or support structure that is damaged.	
11.74	STEP TREAD	Any condition that would present a tripping hazard.	
11.75	HANDRAIL	a) Missing or loose.	
		b) Fails the nut/drawstring test or has not complied with safety recall. (See NHTSA website. WWW.NHTSA.GOV ;))	
11.76	SEATS/BARRIERS	a) Any seat/barrier that is not secured properly.	
		b) Any seat/barrier material so defective that it compromises the integrity of occupant protection and compartmentalization.	
		c) Seat spacing fails to comply with FMVSS 222	
11.77	SEAT (Driver)	a) Fails to adjust or hold proper adjustment.	
		b) Any part of the driver's safety restraint assembly is missing, not properly installed or so defective as to prevent proper securement.	
11.78	DOOR (Entrance)	a) The entrance door does not open or close properly.	
		b) Door control handle does not lock in the closed position.	
		c) Door is equipped with a padlock or similar non-OEM locking device. (Excludes vehicles equipped with an interlock system)	

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
11.79	DOORS (Emergency exits)	a) Any emergency door(s) that does not open freely or completely as designed. b) Any emergency door warning device that is defective. c) Door or roof hatch is equipped with a padlock or similar non-OEM locking device. (Excludes vehicles equipped with an inter-lock system) d) Door hold open device is missing or inoperative.	
11.80	WINDOWS	a) Any glass or glazing that is broken through or missing. b) Not of approved type. c) Windshield has discoloration or other damage in that portion extending upward from the height of the topmost portion of the steering wheel, but not including a 2 inch border at the top and a 1 inch border at each side of the windshield or each panel thereof, except as follows are allowed: (1) Coloring or tinting applied in manufacture, for reduction of glare; (2) Any crack not over 1/4 inch long, if not intersected by any other crack; (3) Any damage area, which can be covered by a disc 3/4 inch in diameter, if not closer than 3 inches to any other such damaged area. d) Drivers side area window(s) have chips, clouding, or cracks that obscure the driver's vision.	
11.81	WINDOWS (Emergency Exits)	a) Any Emergency window that fails to open properly. b) Lacks the required number of emergency windows/roof hatches. (Fails to comply with FMVSS No. 217) c) Required audible warning device(s) not working properly. d) Not properly labeled inside or outside (fails to comply with FMVSS No. 217).	
11.82	DEFROSTERS	Fails to operate.	
11.90	BODY EXTERIOR		
11.91	PANELS, RUB RAILS, TRIM	Any body part that is loose, torn, dislocated or protruding from the surface of the bus, creating a hazard.	
11.92	COMPARTMENT DOORS	Any engine, battery or other door taht is not secured properly.	
11.93	MIRRORS	Any required mirror taht is missing, broken, discolored or will not hold a set adjustment.	
12.00	LAMPS/SIGNALS		
12.01	LAMPS	Any one of the following lamps not working: Brake, turn signal, tail, head (low beam), school bus warning lamps (amber or red), emergency, or stop arm lamp.	
12.02	HORN	Fails to function as designed.	
12.03	GAUGES/BRAKE WARNING	Any critical brake, telltale lamp, buzzer or gauge that fails to function as designed.	
12.04	STOP ARM/OPTIONAL CROSSING DEVICE	Required stop arm(s), or if equipped with a crossing control device fails to function properly.	
12.10	EMERGENCY EQUIPMENT		

ITEM NO.	INSPECTION ITEM	DEFECT	ACTION
12.11	FIRE EXTINGUISHER	Any required fire extinguisher(s) which is missing, not of proper type/size, not fully charged, has no pressure gauge, is not secured or is not accessible to the driver or that does not have an up-to-date inspection tag affixed to it.	
12.12	OTHER STATE REQUIRED EQUIPMENT	Any state required equipment (such as first aid kit and body fluid kit, belt cutter and emergency reflectors) that if not functioning correctly the state specifies is an out-of-service item.	
12.20	WHEELCHAIR EQUIPPED VEHICLES		
		a) Wheelchair lift does not function as designed or is inoperable. b) Any hydraulic line leaking during lift operation. c) Wheelchair tiedown is missing or improperly installed loose or damaged. d) Any required wheelchair occupant restraint system not in compliance.	

ATTACHMENT 1 - BRAKE ADJUSTMENT SPECIFICATIONS

Brake adjustment: Shall be less than those specifications contained herein relating to “Brake Adjustment Limit.” (Dimensions are in inches.)

<u>CLAMP TYPE BRAKE CHAMBER DATA</u>		
<u>TYPE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
6	4 1/2	1 1/4
9	5 1/4	1 3/8
12	5 11/16	1 3/8
16	6 3/8	1 3/4
20	6 25/32	1 3/4
24	7 7/32	1 3/4
30	8 3/32	2
36	9	2 1/4

<u>‘LONG STROKE’ CLAMP TYPE BRAKE CHAMBER DATA</u>		
<u>TYPE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
16	6 3/8	2.0
20	6 25/32	2.0
24	7 7/32	2.0
24*	7 7/32	2.5
30	8 3/32	2.5
* For 3” maximum stroke type 24 chambers		

<u>TIE ROD STYLE PISTON BRAKE CHAMBER DATA</u>		
<u>SIZE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
30	6 1/2 (165mm)	2.5 (64mm)

<u>BOLT TYPE BRAKE CHAMBER DATA</u>		
<u>TYPE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
A	6 15/16	1 3/8
B	9 3/16	1 3/4
C	8 1/16	1 3/4
D	5 1/4	1 1/4
E	6 3/16	1 3/8
F	11	2 1/4
G	9 7/8	2

<u>ROTOCHAMBER DATA</u>		
<u>TYPE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
9	4 9/32	1 1/2
12	4 13/16	1 1/2
16	5 13/32	2
20	5 15/16	2
24	6 13/32	2
30	1 1/6	2 1/4
36	7 5/8	2 3/4
50	8 7/8	3

<u>DD-3 BRAKE CHAMBER DATA</u>		
<u>TYPE</u>	<u>OUTSIDE DIAMETER</u>	<u>BRAKE ADJUSTMENT LIMIT</u>
30	8 1/8	2 1/4
NOTE: This chamber has three air lines and is found on motorcoaches.		

<u>WEDGE BRAKE DATA</u>
The combined movement of both brake shoe lining scribe marks shall not exceed 1/8 inch (3.18mm).

ATTACHMENT 2 - STEERING WHEEL FREE PLAY

Steering Wheel Free Play: Steering wheel free play shall not exceed the requirements listed in the following chart:

Steering Wheel Diameter	Manual System Movement 30	Power System Movement 45
16" (41cm)	2" (5.1cm)	4 1/2" (11.5cm)
18" (46cm)	2 1/4" (5.4cm)	4 3/4" (12cm)
20" (51cm)	2 1/2" (6.4cm)	5 1/4" (13.5cm)
22" (56cm)	2 3/4" (7cm)	5 3/4" (14.5cm)

ATTACHMENT 3 – INSPECTION METHODS

These inspection methods help clarify the normal practice for inspecting each of the previous inspection items.

10.00 BRAKE SYSTEM

10.01 ADJUSTMENT

The inspector shall ensure that the brakes are released, mark the pushrod next to the brake chamber or scribe the brake shoe next to the brake drum (wedge brakes). Make a service brake application measured using a full brake application with the service reservoirs between 90 psi-100 psi. make a second mark next to the brake chamber or scribe a mark on the brake shoe next to the brake drum (wedge brakes) then measure the push rod travel or brake shoe travel (wedge brakes). Refer to ATTACHMENT 1-BRAKE ADJUSTMENT SPECIFICATIONS for proper brake adjustments.

10.02 AIR SYSTEM

The inspector shall be positioned to visually check the air gauges located on the instrument panel.

- A) With brakes released, the inspector shall observe the air gauges for any loss of air pressure.
- B) The inspector shall make a full service brake application and observe the air gauges for any loss of air pressure.
- C) The inspector shall pump the air pressure to below the air compressor cut-in pressure. The engine shall be started and the air pressure build up shall be measured with the engine operating at a high idle (1,500 rpm) and compared to OEM specifications.

10.10 BRAKE SYSTEM – HYDRAULIC

10.11 MASTER CYLINDER

The inspector shall visually check the hydraulic fluid reservoir level and check for leaks in the master cylinder unit.

10.12 PEDAL RESERVE

With the brake pedal in the full upright position, the inspector shall measure the distance between the brake pedal and the floor or firewall. With the engine running, a single firm brake application shall be made and the distance between the brake pedal and the floor or firewall shall be measured a second time. The difference shall be recorded.

10.13 POWER ASSIST UNIT

With engine off, the inspector shall pump the brakes to exhaust all reserve. Hold firm pressure on the brake pedal and start the engine. The pedal should fall slightly. Failure of the pedal to fall slightly indicates a malfunction of the power-assist unit.

10.20 BRAKE COMPONENTS - AIR AND HYDRAULIC

10.21 BRAKE HOSES/TUBING

The inspector shall visually check all brake hoses and/or tubes.

10.22 BRAKE SHOE/PAD LINING

The inspector shall visually inspect all brake linings. It may be necessary to remove inspection access covers, brake dust covers or, in some instances, pull wheels and drums to accomplish the inspection.

10.23 BRAKE DRUM/ROTOR

The inspector shall visually inspect all brake drum/rotors. It may be necessary to remove inspection access covers, brake dust covers or, in some instances, pull wheels and drums to accomplish the inspection. Measurements should be taken in at least 2 locations.

10.30 PARKING BRAKE

The inspector shall set the parking brake and attempt to move the bus ahead in drive gear. The parking brake should hold the bus.

10.40 STEERING SYSTEM

The inspector shall visually check the entire steering system.

10.41 STEERING COLUMN/WHEEL

- A) The inspector shall visually examine all u-bolts and positioning parts. The inspector shall examine all u-joints while the steering wheel is being rotated in a back and forth action to determine looseness in the u-joint.
- B) The inspector shall visually examine all fasteners for any worn, missing or damaged parts.
- C) The inspector shall manually rotate the steering wheel in a back and forth method to determine securement of the steering wheel.
- D) The inspector shall measure free play with engine running for power steering.

10.42 FRONT AXLE BEAM

The inspector shall visually examine the front axle beam for cracks or welded repair.

10.43 STEERING GEAR BOX

The inspector shall visually examine the steering gear box mounting bolts, cracks in the gear box or mounting bracket, or obvious welded repairs.

10.44 PITMAN ARM

The inspector shall examine the pitman arm and output shaft connection, while the steering wheel is being rotated in a back and forth motion, for looseness in the joint. The inspector shall also visually examine the pitman arm for weld repairs.

10.45 POWER STEERING

The inspector shall manually manipulate the auxiliary power assist cylinder to check for looseness. The inspector shall start the bus and rotate the steering wheel in a back and forth action to ensure the power steering pump is operable.

10.46 BALL/SOCKET JOINTS

With the bus on the ground, the inspector shall examine the ball joint nut stud for movement while the steering wheel is being rocked in a back and forth action. With the bus lifted in the air, the inspector shall check for lateral and vertical movement by grasping the tie rod and attempting to laterally and vertically move the ball joint (rotational movement will not be considered). The inspector shall examine the ball/socket joint for weld repairs.

10.47 TIE RODS/DRAW LINKS

The inspector shall visually examine all clamps, clamp bolts, and threaded joint on the tie rod and drag links for looseness.

10.48 NUTS

The inspector shall visually examine all tie rods, pitman arm, drag link, steering arm and tie rod arm for looseness and missing fasteners.

10.49 HOSES/FLUIDS

The inspector shall visually examine the power steering fluid reservoir and hoses for leaks. The inspector shall check the power steering fluid level.

10.50 SUSPENSION COMPONENTS

10.51 AXLE PARTS/MEMBERS

The inspector shall visually examine all springs, spring hangers, king pins, ball joints, struts, shock absorbers, air bags, u-bolts, and other axle positioning components for missing, broken, cracked, loose or worn components.

10.60 CHASSIS/FRAME/UNIBODY

10.61 FRAME

The inspector shall visually inspect the entire frame.

10.62 CROSS MEMBERS

The inspector shall visually inspect each frame cross member, outrigger and other structural supports.

10.63 OUTRIGGERS/BODY SUPPORTS

The inspector shall visually inspect all body outriggers and body supports.

10.64 BUMPERS

The inspector shall visually inspect each bumper.

10.70 EXHAUST SYSTEM

10.71 LEAKS

With the vehicle safely secured (in park, brakes set, wheels chocked or other method), the inspector shall examine the entire exhaust system, with the engine running, for leaks and loose components.

10.80 FUEL SYSTEM

10.81 FUEL CONTAINER/CONNECTION

The inspector shall visually examine the fuel tank and all components of the fuel system.

10.90 DRIVE SHAFT

10.91 DRIVE SHAFT GUARD

The inspector shall visually inspect and manually verify the presence, securement and proper placement of all required drive shaft guards.

10.92 UNIVERSAL JOINTS

The inspector shall check for lateral and vertical movement of the universal joints by grasping the universal joint and attempting to move the joint laterally and vertically.

11.00 DIFFERENTIAL

11.01 HOUSING

The inspector shall visually check the differential for cracks and leaks.

11.10 ENGINE

11.11 COMPONENTS

The inspector shall visually examine and monitor the engine operations.

11.12 LEAKS

The inspector shall visually examine the engine for any signs of fluid leaks.

11.20 TIRE/WHEELS/HUBS

11.21 TIRE TREAD DEPTH

The inspector shall measure the tire tread depth at 3 points, spaced equally around the tire in the same major tread groove.

11.22 TIRE SIDEWALL

The inspector shall visually check each tire, on both sides, for cuts, wearing or damage that exposes plycord. Also, inspect for any bumps, bulges or knots related to sidewall or tread separation.

11.23 TIRE INFLATION

The inspector shall physically measure tire air pressure on any tire that appears low.

11.24 TIRE TYPE

The inspector shall examine all tires to ensure that the load range and size meet or exceed manufacturers recommendations for the bus. The inspector shall examine all tires to ensure that all tires on the same axle match.

11.25 WHEELS/RIMS/SPIDERS

The inspector shall visually inspect each wheel, rim and spider for broken, missing, damaged or loose nuts, bolts, studs, and lugs. Each wheel/rim shall be visually inspected for cracks, proper seating, damage or welds.

11.26 HUB

With front wheels raised, alternately apply sufficient inward force to upper and lower edges of tire to obtain maximum travel. Measure play at lower out board edge of tire. Spin tire and listen for noise in wheel bearing.

11.30 AISLE

11.31 CLEARANCE

The inspector shall measure the width of each aisle for compliance;

12 inches minimum at seat cushion

15 inches minimum at top of seat backs

12 inches minimum to emergency doors

30 inches minimum from wheelchair or mobility aid position to closest emergency door and lift area

11.32 OBSTRUCTION

The inspector shall visually inspect all aisles and exits.

11.40 ELECTRICAL

11.41 WIRING

The inspector shall examine all visible wiring and electrical components.

11.50 BATTERY

11.51 CONDITION

The inspector or bus operator shall attempt to start bus.

11.52 WIRES

The inspector shall examine the wiring leading from the battery for loose, corroded or exposed wires.

11.53 BATTERY SECUREMENT

The inspector shall visually and manually check to see that the battery is secured to prevent movement.

11.60 WINDSHIELD WIPERS

11.61 OPERATION

The inspector shall visually check for presence of all required windshield wipers. With wipers operating, inspector shall verify normal wiper operation.

11.70 BODY INTERIOR

11.71 PANELS

The inspector shall visually inspect all interior panels for sharp edges, loose or protruding panels, which may cause injury.

11.72 FLOORS

The inspector shall visually inspect the floor for perforations and openings.

11.73 STEP WELL

The inspector shall visually and manually check to ensure that all parts of the step well are supported and undamaged.

11.74 STEP TREAD

The inspector shall visually examine the step treads.

11.75 HANDRAIL

The inspector shall visually check for required handrail(s) and shall examine all handrails for compliance with handrail safety recalls.

11.76 SEATS/BARRIERS

The inspector shall visually and manually check each seat and barrier for securement, material integrity and compliance with FMVSS No. 222, *School Bus Passenger Seating and Crash Protection*.

11.77 SEAT(DRIVER)

The inspector shall ensure that the driver's seat has a full range of motion and locks securely in any position. The inspector shall visually and manually check the driver's restraint assembly for proper assembly, attachment and driver securement.

11.78 DOOR (ENTRANCE)

The inspector shall operate the entrance door through the full range of motion ensuring proper operation and that the handle locks in the closed position. The inspector shall examine the entrance door for locks, padlocks or other non-OEM locking device.

11.79 DOORS (EMERGENCY EXITS)

The inspector shall manually operate each emergency door for ease of operation as designed and to insure operation of the warning device and hold open device. The inspector shall examine the emergency door for locks, padlocks or other non-OEM locking device.

11.80 WINDOWS

The inspector shall visually inspect each windshield and window.

11.81 WINDOWS (EMERGENCY EXITS)

The inspector shall manually operate each emergency window for ease of operation as designed and to ensure operation of the warning device.

11.82 DEFROSTERS

The inspector shall activate each defroster to check for proper operation.

11.90 BODY EXTERIOR

11.91 PANELS/RUB RAILS/TRIM

The inspector shall visually inspect each body part, panel, rub rails and trim piece for loose, torn, dislocated or protruding part, which may snag or catch clothing or otherwise cause a hazard.

11.92 COMPARTMENT DOORS

The inspector shall manually and visually inspect each engine, battery, luggage or other door for proper securement and operation.

11.93 MIRRORS

The inspector shall visually examine all mirrors to ensure all are present, as required, and examine for breakage and discoloration. The inspector shall examine each mirror to ensure it will hold a set adjustment.

12.00 LAMPS AND SIGNALS

12.01 LAMPS

The inspector shall check all lamps for proper operation.

12.02 HORN

The inspector shall verify normal horn operation.

12.03 GAUGES/BRAKE WARNING

The inspector shall examine all gauges for proper operation and shall cause all brake failure warning lamps and/or low air warning indicators to operate so proper operation may be verified.

12.04 STOP ARM/OPTIONAL CROSSING DEVICE

The inspector shall cause each required stop arm(s) and/or each crossing control device to extend verifying normal operation.

12.10 EMERGENCY EQUIPMENT

12.11 FIRE EXTINGUISHER

The inspector shall visually check for compliance and securement.

12.12 OTHER STATE REQUIRED EQUIPMENT

Follow state criteria.

12.20 WHEELCHAIR EQUIPPED VEHICLES

The inspector shall visually inspect and operate all wheelchair lifts, securement systems and all required wheelchair occupant restraint systems.