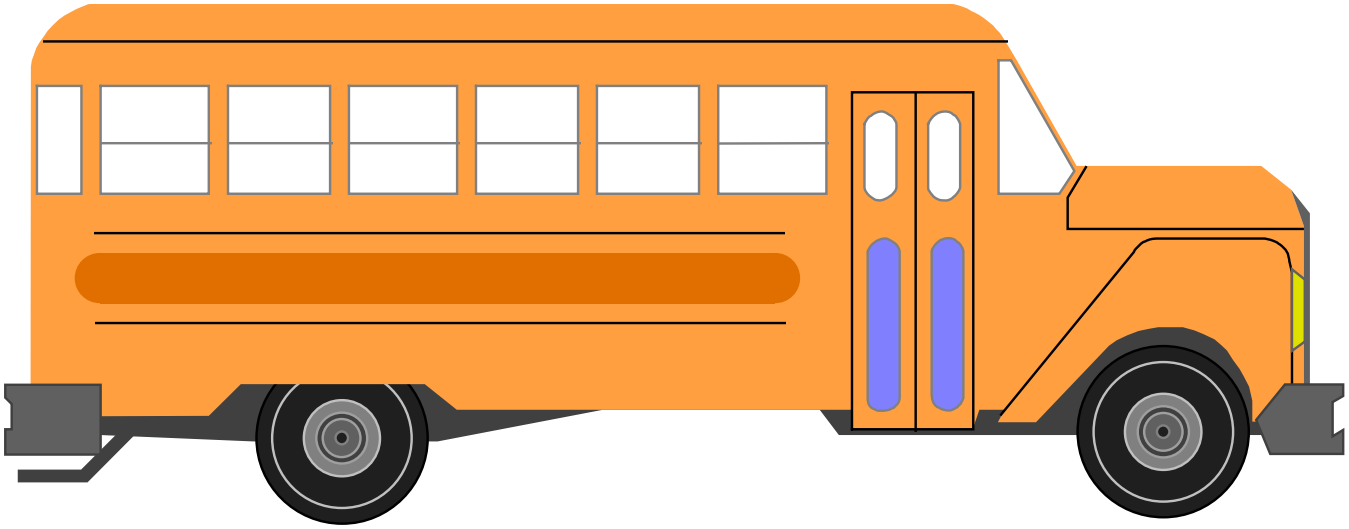
Iowa Department of Education

School Bus Maintenance & Inspection Manual



A guide for school transportation & maintenance personnel.

July 2000

State of Iowa
Department of Education
Grimes State Office Building
Des Moines, Iowa
50319-0146

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IOWA DEPARTMENT OF EDUCATION
SCHOOL BUS INSPECTION/MAINTENANCE MANUAL

Purpose

To provide every school bus inspector, out-sourced repair facility, and pupil transportation supervisor/mechanic through out the state of Iowa with a guide to the inspection program with regard to the standards defined in Chapter 44, Iowa Administrative Code, relating to the construction of school buses in Iowa.

Objective

The objective of this manual is to improve the integrity of the school bus inspection through standardization.

It is the responsibility of the School District's Supervisor/Mechanic and/or out-sourced repair facility to inspect affected vehicles using this manual as a reference either annually or at scheduled PM inspections.

Goal

The goal of this manual is to ensure that all inspections are conducted the same; that all transportation supervisors/mechanics are aware of what items on the vehicle are to be inspected, and how they are to be inspected; and that as a result of the inspections, what items are to be considered as out of service or on a 30 day repair report.

Through this manual and with the cooperation of all inspectors, coordinators, and transportation supervisors/mechanics, the total number of out-of-service vehicles will be drastically reduced, thus assuring the parents of children being transported on these buses, that they have passed a very rigid and high quality inspection—one that has been conducted by specialists who take pride in their work.

(Inspectors Note)

This manual may not cover every defect which may be encountered on every school bus. Therefore, it is the duty and responsibility of the individual inspector to reject or place out-of-service, any bus which has a defect or condition which may jeopardize the safe operation of the bus and/or the safety of the passengers. Defects or conditions not covered in these pages can still be evaluated and acted on by the inspector at the time the vehicle inspection.

FOREWORD

An inspection program for any vehicle should attempt to delineate the items to be inspected and to set minimal conditions for each beyond which the vehicle is considered unsafe and should not be operated.

Considering the very nature of the school bus cargo, the following items would be of prime interest when evaluating the condition of the vehicle:

1. **The braking efficiency and the total braking system**
2. **Suspension and steering components**
3. **The exhaust system**
4. **Tires**
5. **Lights**

Other items found in this manual will enter into the overall picture when considering in total. The final determination to allow the continued use of the vehicle for transportation of school students to and from school and school related activities, or the determination to place a vehicle out of service, must rest with the school bus inspection team and the Department of Education, State of Iowa.

TABLE OF CONTENTS

"School Bus Maintenance & Inspection Manual"

(Part A) INSIDE BUS (Required)

(Part B) OUTSIDE BUS (Required)

(Part C) ENGINE COMPARTMENT (Required)

(Part D) UNDERNEATH BUS (Required)

A. INSIDE BUS
1. Emergency Equipment

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Fire Extinguisher (Inspection Item # 49)			
1) Check for presence of fire extinguisher	1		
a) No fire extinguisher on bus.	a		a
2) Check pressure gauge for charge	2		
a) Pressure above or below green zone.	a		a
3) Tag (Inspection Date)	3	**Note Only**	
a) Check for presence of inspection tag and inspection date. ***(Exception: Buses less than one year old with original fire extinguisher.)***	a		
4) Fire Extinguisher Mounting	4		
a) Bracket mount to panel is loose	a	a	
b) *Fire extinguisher not accessible to driver*	b	b	
c) *Fire extinguisher not secured in mounting bracket*	c	c	
d) *Fire extinguisher is mounted in any compartment not properly labeled.(ref. IAC 44.4(15))*	d	d	
5) Rating: check for proper U.L.(Underwriters Laboratory) rating.	5		
a) 2 ½ lb. Min. and 2A-10 BC rating- family type or multipurpose vehicles (IAC 44.6(2)).	a		a
b) *5 lb. Min. and 2A-10 BC rating – all buses 10 pass. Capacity and greater.*	b		b
6) Nozzle: Steel Discharge	6		
a) Check for loose, missing, or damaged parts of the fire extinguisher.	a		a
b) *Check if equipped with plastic discharge valve (ref. IAC 44.4(15)).*	b		b
7) Safety Pin	7		
a) Check for presence of safety pin and tamper proof seal (ref. IAC 44.4(15)).	a	a	

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
1. Emergency Equipment

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
First Aid Kit (Inspection Form Item-#50)			
1) First Aid Box	1		
a) No kit per vehicle	a		a
b) Check kit condition should be moisture and dust proof, and clearly marked.	b		b
c) Mounting: Check accessibility and mounting(Not loose mounted or mounted as to not be portable or mounted in any compartment not properly labeled.	c	c	
2) Contents	2		
a) Inspect for Kit Contents.(capacity of 9 or less)	a	a	

Multipurpose and passenger type vehicles used as a school bus, with a capacity of 9 or less passengers.

DESCRIPTION	QUANTITY
4” bandage compress	1 pkg.
2” bandage compress	1 pkg.
1” bandage compress (e.g., Band-Aid)	1 pkg.
triangular bandage	2 pkgs.
3” x 3” plain gauze pads	1 pkg.
Wire splint	1 pkg.
Gauze compress 2pc. 18”x36”	1 pkg.
Gauze roller bandage	1 pkg.
Absorbent gauze compress 24”x72”	1 pkg.

b) Inspect for Kit Contents. (capacity of 10 or more)	b	b	

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A. INSIDE BUS
1. Emergency Equipment

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)
Repair - 30-Day* O.O.S.*

Items to be inspected & condition. **

Type A,B,C,D, buses with a capacity of 10 or more passengers.

DESCRIPTION	QUANTITY
1” x 2 ½ yd. adhesive tape rolls	2 rolls
3”x 3” sterile gauze pads	24
¾” x 3” adhesive bandages	100
2” bandage compress	12
3” bandage compress	12
2” x 6’ sterile gauze roller bandage	2
40” x 36” x 54” triangular with two safety pin	2
36” x 36” sterile gauze pads	3
Sterile eye pads	3
Latex gloves and rounded nose scissors	1pr.
Mouth to mouth airway	1

Body Fluid Clean up Kit (Inspection Item-#)

1) Contents — 1

DESCRIPTION
An EPA registered germicide (tuberculicidal) disinfectant - 1 unit
A fully disposable wiping cloth – 1 unit
A water resistant spatula – 1 unit
Step-by-step directions – 1 unit
Absorbent material with odor counteractant -1 unit
Latex gloves – 2 pair

	Repair	30-Day*	O.O.S.*
a) Body Fluid Clean Up Kit missing (Beginning Nov. 1998)	a		a
b) Contents: Check that all contents are intact and sterile. (For contents list, see Chart)	b	b	
c) Check container for condition, mounting, and contents (starting November, 1998). Body Fluid Clean Up kit not present.	c		c

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A. INSIDE BUS
1. Emergency Equipment

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
d) Kit not secured or loose mounting.	d		
e) Tamper proof seal broken or missing or contents not in plastic factory sealed bag	e	e	
Reflectors (Inspection Item #51)			
1) Triangular Reflective Devices	1		
a) Check for proper type and condition: Must be selfstanding, triangular,17" tall reflectors, cannot be broken, deformed or unusable.	a	a	
b) Check quantity: three(3) required.	b	b	
c) Storage box broken or won't remain latched.	c	c	
d) Box is not accessible or not securely mount forward of passenger compartment.	d	d	
e) Reflectors are mounted in lockable compartment which is not properly labeled. (Ref.I.A.C. 44.4(15))	e	e	

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A. INSIDE BUS
2. Registration, Insurance Card, 27A Chassis Inspection Card, Last Inspections Yellow Copy of 27 Inspection Form

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Registration			
1) Check for a valid Iowa registration certificate which is to be available in each bus.	1		1
Insurance Card			
1) Check for the presence of insurance card. (*Public schools, if required by Local school policy)* (Ref. Ia.Code 321.20B)	1		
a) Public schools (Does not apply).			
b) Nonpublic and contractor. OOS	b		b
27A Chassis Inspection Card (Inspection Item # 1)			
1) Check for presence of current chassis inspection card	1		
a) Card is missing.	a	a	
b) Card is not signed.	b	b	
c) Card is not dated.	c	c	
Yellow copy of the passed #27 bus inspection sheet			
1) Note: If documentation of the past inspection cannot be produced the vehicle will need to be taken to an alternative location for inspection at a later date.	1		1

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A. INSIDE BUS
3. Neutral Safety Switch

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Neutral Safety Switch			
1) Check to determine if the automatic transmission has a functional neutral safety switch	1		
a) Starter must work in the park or neutral position only.	a		a

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A. INSIDE BUS
3. Shifter

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Shifter-Automatic Transmission			
1) Check that shifter operates easily.	1		
a) Will not shift into all gear positions. OOS	a		
2) Correctly indicates the gear that the transmission is in.	2		
a) Indicates the wrong gear.	a		
3) Has a functional detent mechanism with a ball, knob (handle) on end of shift lever.	3		
4) Detent is non functional.	4		
Shifter-With Park Brake Shifter Option			
Check that shifter operates in each gear.			
1) Will not shift into any gear. OOS	1		
2) Check that rear spring brake applies when shifter is placed in "P" (Park) position.	2		
Shifter-Standard Transmission			
1) Check that shifter operates easily in each gear.	1		
a) Will not shift into any gear.	a		
2) Has a ball or knob on end of shifter lever.	2		
3) Check that shifter (floor) boot is intact and not damaged.	3		
4) Check to determine if standard transmission bus has a starter interlock to prevent activation of the starter if the clutch pedal is not fully depressed (IAC 44.3(10)).	4		

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A. INSIDE BUS
4. Engine Controls

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Key Switch			
1) Check that switch only operates by key.	1		
a) Key sticks in switch.	a		
b) Switch operates without key.	b		
c) Bus is equipped with push button or other devices rather than key type switch.	c		
d) Loose or not mounted in O.E.M. location	d		
e) Should operate freely in each function; i.e., start, run, off, and accessory position.	e		
2) Choke (if cable equipped)	2		
a) Check that cable moves freely and check for normal operation of choke.	a		
b) Cable is sticking or hard to operate	b		
Accelerator			
1) Check that accelerator pedal, control design, and mounting securement are O.E.M..	1		
a) Pedal cover (as originally equipped) is worn out (repair).	a		
2) Inspect pedal assembly and linkage for loose or missing hardware.	2		
a) Must have dual (two) return springs.	a		
3) Check for smooth operation of pedal assembly and linkage in the accelerating and coast position. OOS	3		
4) Inspect for unauthorized built up pedal, i.e., Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps, or glue. OOS	4		4

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A. INSIDE BUS
4. Engine Controls

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)
Repair - 30-Day* O.O.S.*

Items to be inspected & condition. **

Engine Shutdown			
1) Only O.E.M. approved ignition controlled shutdown acceptable on all buses.	1		
2) Check for free operation of shutdown over full range with minimum effort (if equipped with manual type shutdown on diesel buses, pre-November, 1989).	2		
3) Check operation of key switch type shutdown (if equipped with electrically operated shutdown on diesel buses, required starting November, 1989).	3		

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A. INSIDE BUS
5. Gauges, Indicators & Dash Lights, Engine Warning Lights, and Buzzers

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Gauges (Inspection Item # 42 & 43)			
1) Check from driver's position the visibility, O.E.M. location, readability, operation, accuracy, and condition of the following gauges:	1		
a) Speedometer and odometer.	a		
b) *Oil pressure.*	b		
c) Temperature.	c		
d) Fuel.	d		
e) Voltmeter-Not equipped with voltmeter.	e		
f) Air pressure or vacuum.	f		
1) Air pressure or vacuum gauge(s) are inaccurate, unreadable or not working.	1		
a) Unreadable or not working.	a		
b) Air pressure gauge must read within plus or minus seven (7) p.s.i. (single gauge) at 100 p.s.i.	b		

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. INSIDE BUS
5. Gauges, Indicators & Dash Lights, Engine Warning Lights, and Buzzers

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **

	(School) Repair	(Dept. of Education) 30-Day*	O.O.S.*
Indicators and Dash Lights Regardless of Fuel Type (Inspection Item # 28 a & 30)			
1) Check for presence and operation of the following indicators: (Inspection Item #30)	1		
a) Low air pressure or vacuum warning light.	a	a	
b) High beam light.	b	b	
c) Left and right turn signal and 4-way hazard.	c	c	
d) Check all dash and control panel lights for illumination at gauges and switches.	d		
2) Light bulb for the following gauge or control are inoperative:	2		
a) Oil pressure	a		
b) Temperature	b		
c) Fuel	c		
d) Voltmeter	d		
e) Ammeter	e		
f) Engine Shutdown (Bowden Cable)	f		
g) Strobe light	g		
h) 8 way warning pilot lights	h		

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A. INSIDE BUS
5. Gauges, Indicators & Dash Lights, Engine Warning Lights, and Buzzers

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Engine Warning Lights and Buzzer			
1) Check for presence and operation of the following warning lights and buzzer (or bell).	1		
a) High coolant temperature dash warning light and buzzer (or bell) on diesel buses manufactured starting November, 1982.	a		
b) Low oil pressure dash warning light and buzzer (or bell) on diesel buses manufactured starting November, 1982.	b		

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A. INSIDE BUS
6. Air Brake System

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)
Repair - 30-Day* O.O.S.*

Items to be inspected & condition. **

Gauge(s) (Inspection Item # 52) **1) For buses built after April 1, 1977, check for presence of two (2) air pressure gauges (or single gauge with dual needles). One (1) gauge or needle should indicate air pressure available to the front air brake system, and the other should indicate air pressure available to the rear air brake system. Both gauges must be accurate to within ± 7% (at 100 lbs. × 7%= 7 lbs.).** **NOTE: If bus equipped with optional Anti-lock Braking System, refer to appropriate Manufacturer's Service Manual for inspection criteria.**	1		

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A. INSIDE BUS
6. Air Brake System

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Buildup (Inspection Item # 52)			
Air reservoir must be drained thoroughly before making this check. Check time required for system air pressure to build up from 85 to 100 p.s.i. with engine at fast idle (approximately 1,200 R.P.M.). (Air pressure buildup time from 80 to 100 p.s.i. at fast idle is greater than 45 seconds - OOS)	x		
NOTE: If air brake gauge(s) failed previous check for accuracy, do not perform this check until gauge(s) are repaired.	**Note**		
Governor			
1) Check air brake system governor operation. While building up system air pressure, note pressure at which governor cuts-out (compressor quits compressing). With engine still running, pump brakes to lower air pressure until compressor cuts-in (starts compressing again). Note pressure.	1		
a) Cut-out pressure is too low (below 100 p.s.i.) or too high (above 130 p.s.i.).	a		
b) Difference between governor cut-out and cut-in pressure exceeds 25 p.s.i.	b		
c) Cut-out pressure is below 120 p.s.i. (for buses equipped with air dryer system; repair).	c		
NOTE: If gauge(s) failed previous check for accuracy, do not perform this check until gauge(s) are repaired.	**Note**		

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A. INSIDE BUS
6. Air Brake System

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Park Brake (Inspection Item # 53)			
1) Check for proper operation of park brake as follows:	1		
a) With vehicle stopped, apply park brake. When engine torque is applied by partially engaging clutch in second gear (manual transmission) or by placing transmission selector in "Drive" (automatic transmission) and accelerating the engine to a fast idle (approximately 1,200 R.P.M.'s), vehicle should not move forward.			a
NOTE: Buses equipped with Rear Diesel Engine and Allison World Transmission should be checked at 900 R.P.M.	**Note**		
Adjustment			
1) With engine shut off, park brake released and air system pressure at 100 p.s.i. or above:	1		
a) Note air pressure.	a		
b) Apply service brakes firmly and release.	b		
c) Note air pressure drop resulting from brake application. (If pressure drop is greater than 15 p.s.i. do not move bus until brakes have been adjusted – OOS)	c		

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A. INSIDE BUS
6. Air Brake System

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
NOTE: Water must be drained from reservoir before performing brake adjustment check. This check is to determine if brake adjustment (pushrod travel) is excessive before continuing inspection. Adjustment should be examined according to district pm schedule. Adjustment procedure will be covered under "Front Brake" and "Rear Brake" sections later in this manual.	**Note**		
<u>Air Leaks</u>			
1) Fully charge air system (pressure at least 100 p.s.i.).	1		
2) Shut off engine and release emergency brake.	2		
3) With brakes in released position, check for air pressure leak (pressure drop) for at least one (1) minute. Note pressure drop, if any.	3		
Air is leaking, but rate is less than two (2) p.s.i. per minute (brakes released) or three (3) p.s.i. per minute (with service brake applied; repair).			
4) Firmly apply the service brake. Do not release. Check for air pressure(with service brake applied).	4		
5) During both checks (brakes released and applied) listen for any audible air leaks. There is any audible air leak.	5		
6) Any audible air leak.	6		6

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A. INSIDE BUS
6. Air Brake System

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **	Repair	30-Day*	O.O.S.*
NOTE: If air brake gauge(s) failed previous checks, do not perform this test until gauge(s) are repaired.	**Note**		
Low Air Warning (Inspection Item # 52)			
1) Check operation of low air warning buzzer and light, by building air pressure up to 100-125 p.s.i. and perform the following procedures:	1		
a) With ignition key switch in run position, pump air brake pedal to drop air pressure.	a		
b) Low air warning buzzer and light should activate by the time pressure drops to 60 p.s.i. Light or buzzer fails to operate.30 day	b	b	
c) Light and buzzer fails to operate by 60 p.s.i. or continues to operate above 70 p.s.i. OOS	c		c
d) Start engine and build up air pressure. Warning buzzer and light should deactivate by 70 p.s.i.	d		d

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A. INSIDE BUS
6. Air Brake System

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Pop-Off, Emergency Brake Control Valve			
1) Check for presence (on all buses built since April 1, 1977) for a PP-1 (pop-off style) emergency brake control valve. Check condition, location, mounting, and type of valve and knob. With pressure above 45 p.s.i., apply and release valve to check operation.	1		
Park brake pop-off valve automatically "pops out" (activating park brake) above 50 p.s.i. or fails to "pop out" between 15 to 50 p.s.i.			
a) Label identifying valve is missing or unreadable (repair).	a	a	
b) Valve not mounted securely (in original position).	b	b	
c) Knob is broken or cracked.	c	c	
d) Rubber cover pad is worn (repair).	d	d	
e) Any part of pedal and assembly is damaged, loose, missing, or has been modified.	e	e	
f) Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps or glue..	f		f
Pop-Off			
1) For buses equipped with pop-off type (PP-1) park brake control valve, check for emergency activation of valve by pumping down brakes (starting with at least 60 p.s.i. in air system) and noting air pressure at which valve "pops out."	1		
Pedal			
1) Check air brake pedal assembly for adjustment, mounting, condition, operation, and rubber cover pad (if originally equipped). Check for presence of prohibited extender block.	1		

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Inspection Item #52 & 53 Note* Since there are four (4) distinct types of hydraulic brake systems in use on Iowa school buses, this manual will cover each system individually. It is imperative that you know the type of system you will be inspecting to ensure that the proper inspection procedure is used. The four (4) types of systems are: **a**. Standard Vacuum Assisted Hydraulic Brakes, **b**. Hydraulic Power Assisted Hydraulic Brake with Accumulator Backup, **c**. Hydraulic Power Assisted Hydraulic Brakes with Electric Pump Backup and Driveshaft Park Brake Systems, and **d**. Hydraulic Power Assisted Hydraulic Brakes with Spring Set (hydraulically released) Parking Brakes (Ford Maxibrake). (Also see Charts 1, 2, 3, or 4 at the end of the Hydraulic Brakes Section)			

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Standard Vacuum Assisted Hydraulic Brakes; Inspect for:			
1) Any visible leaks in the hydraulic brake system.	1		1
2) Check brake pedal reserve (distance from floor) upon firm brake application (engine running).	2		
a) Brake pedal (reserve) is less than one (1") inch from floor.(OOS)	a		
b) Check brake pedal fade (pedal falls to floor when held down with engine running and with engine off) indicating brake system leak.(any brake pedal fade-OOS)	b		
3) Check vacuum gauge operation (if equipped) and low vacuum indicator light and buzzer (if equipped) with full vacuum below eight (8) inches of mercury (hg). (light and buzzer do not come on below eight (8) inches of mercury(hg).- OOS	3		
4) Check for brake warning light illumination with ignition key in "Start" position. Check to ensure brake failure warning light is not on during normal operation (with and without brakes applied).	4		
5) Check for vacuum drop while engine is off and brakes are not applied.	5		
6) Check vacuum assist (booster) operation.	6		
a) *With engine off apply brakes several times to exhaust vacuum. Depress and hold the brake pedal down while starting the engine. Pedal should "fall away" slightly, indicating increased pressure being applied by the assist* unit.	a		
7) Turn engine off, and apply the brakes.	7		
a) There should be enough reserve in the vacuum system to allow at least one (1) power-assisted brake application	a		

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A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
8) Check all brake hardware components inside bus for secure mounting, routing, and condition, including:	8		
a) Pushrod and clevis assembly.	a		
b) Brake pedal assembly and rubber cover (if originally equipped).(rubber pedal cover is missing-30 day)(Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps, or glue..-OOS)	b		
c) Emergency brake control assembly.	c		
9) Parking Brake Operation	9		
a) With vehicle stopped (engine running), apply park brake. When engine torque is applied by partially engaging clutch in second gear (manual transmission) or by placing transmission selector in gear (automatic transmission) and accelerating the engine to a fast idle (approximately 1,200 R.P.M.'s), vehicle should not move forward.	a		a

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A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Hydraulic Power Assisted Hydraulic Brakes with Accumulator Backup; Inspect for:			.
1) Any visible leaks in the brake or hydraulic assist system.	1		1
a) Check brake pedal reserve (distance from floor) upon one (1) firm brake application is less than 1 1/2 inch, (engine off, accumulator depleted).OOS	a		
b) Check brake pedal fade (test minimum 1 1/2 minutes, engine off). Firmly apply brake pedal and hold.	b		
2) Check for brake warning light illumination with ignition key in "Start" position. Check to ensure brake failure warning light is not on during normal operation (with and without brakes applied).	2		
3) Power assist check:	3		3
a) With engine off apply the foot brake several times, then hold down.	a		
b) Start the engine.	b		
c) The pedal should fall, then push back against your foot.	c		
d) Listen for engine drive belt squeal.	d		
e) Release brake pedal.	e		
f) Turn engine off.	f		
g) Depress brake pedal. Accumulator should hold enough pressure to allow two (2) assisted brake applications.	g		
4) Secure mounting, routing, and condition, including:	4		
a) Pushrod and clevis assembly.	a		
b) Brake pedal assembly and rubber cover pad (if originally equipped).Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps, or glue. - OOS	b	b	
c) Rubber cover pad is worn or missing (repair).	c	c	
5) Emergency brake control assembly.	5		
a) Emergency brake control is hard to operate or doesn't latch and release properly.	a		
6) Parking Brake Operation	6		
a) With vehicle stopped (engine running), apply park brake. When engine torque is applied by partially engaging clutch in second gear (manual transmission) or by placing transmission selector in "Drive" (automatic trans.) and accelerating the engine to a fast idle.	a		
b) Park brake doesn't hold or functions improperly.	b		b

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A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hydraulic Power Assisted Hydraulic Brakes with electric pump backup and driveshaft park brake system, Inspect for:			
1) Any visible leaks in the brake or hydraulic assist system.	1		1
2) Check brake warning and backup systems using the appropriate chassis manufacturer's procedure in Chart 1, 2, 3, or 4 at the end of the Hydraulic Brake Section.	2		
3) Check brake pedal reserve (distance from floor) upon one application of:	3		
a) Firm brake application (engine off, electric boost activated).	a		a
b) Check brake pedal fade (continues to fall to floor after initial firm application) with engine off.	b		
4) Check all brake hardware and components inside the bus for secure mounting, routing, and condition, including:	4		
a) Brake pedal assembly and brake pedal rubber cover pad is loose or worn (repair). Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps, or glue..(OOS)	a		
b) Brake pedal pushrod and clevis assembly.	b		
c) Emergency brake control assembly.	c		
5) Check Parking Brake	5		
a) With vehicle stopped (engine running), apply park brake. When engine torque is applied by partially engaging clutch in second gear (manual transmission) or by placing transmission selector in "Drive" (automatic transmission) and accelerating the engine to a fast idle (approximately 1,200 R.P.M's), vehicle should not move forward.	a		
b) Park brake doesn't hold or functions improperly.	b		b
c) Emergency brake control is hard to operate or doesn't latch and release properly.	c	c	

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A. INSIDE BUS
7. Hydraulic Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hydraulic Power Assisted Hydraulic Brakes with Spring Set (Hydraulically released). Parking Brakes (Ford Maxibrake); Inspect for:			
1) Any visible leaks in the brake or power assist system.	1		1
2) Check brake warning and backup system using Chart 3 ,Page 28 at the end of the Hydraulic Brake section.	2		2
3) Check brake pedal travel: Push brake pedal down as far as possible.	3		
4) Check for brake pedal fade. (Pedal falls away to floor when held down with engine running and with engine off), indicating brake system leaks.	4		
5) Check Parking Brake System:	5		
a) With engine running, release the parking brake.	a		
b) Check to be sure brakes are released (bus will move).	b		
c) Turn engine off.	c		
d) System must maintain pressure (keep parking brake released) for at least five (5) minutes.	d		
e) With vehicle stopped (engine running), apply park brake. When engine torque is applied by partially engaging clutch in second gear (manual transmission) or by placing transmission selector in "Drive" (automatic transmission) and accelerating the engine to a fast idle (approximately 1,200 R.P.M.'s), vehicle should not move forward.	e		e
6) Check all brake hardware and components inside the bus for secure mounting, routing, and condition, including:	6		
a) Brake pedal assembly and rubber cover pad (if originally equipped).Rubber cover pad is worn or missing. (30 day) Pedal is equipped with any type of extender block that is made of wood or is loose or improperly fastened by tape, straps, or glue.. (OOS)	a		
b) Brake pedal assembly, pushrod and clevis, or emergency brake control assembly is insecurely mounted, has loose,missing, or worn hardware, or is damaged.	b		
c) Emergency brake control assembly.	c		

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WARNING LIGHTS/BUZZER			
CHART 1	**Normal Operation**		

FORD

MODE	Indicator		
	Brake Lamp	Brk. Elec. Mtr. Lamp	Buzzer
1a. Engine Off/Ignition Off no brake applied	Off	Off	Off
1b. Engine Off/Ignition Off brake applied	Off	On	On
2. Engine Off/Ignition On or START with or without brake applied	On	On	On
3. Engine On with or without brake applied	Off	Off	Off

GMC

MODE	Normal Operation		
	Brake Warning Light	Brk. Elec. Hyd. Boost Warning Light	Tone Alarm
1. Engine off-ignition off A. No brake applied B. Brake apply	 Off On	 Off Off	 Off Off
2. Engine off-ignition on with or without brake applied (bulb check).	On	On	On
3. Engine off-ignition on start with or w/out brake applied.	On	Off	On
4. Engine on with or without brake applied.	Off	Off	Off

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CHART 2 - Brake Failure Warning System Checks	
NAVISTAR	
CONDITION	**NORMAL OPERATION**
PARK BRAKE LIGHT	
Key switch in START position w/park brake released - (Bulb check).	Light ON
Key switch ON w/park brake applied.	Light ON
BRAKE PRESSURE LIGHT	
Key switch OFF.	Light OFF, electric hydraulic pump operates when service brakes are applied.
Key switch in ON position. Engine not operating (pump and bulb check).	Light ON and electric hydraulic pump operation (some vehicles) SEE NAVISTAR MANUAL
	Light ON and electric hydraulic pump operates when service brakes are applied.
Key switch in ON position and Engine operating with service brakes applied.	Light OFF
Key switch in START position.	Light ON momentarily and electric hydraulic pump operates.
Key switch in ON position and engine operating with service brakes applied.	Light OFF

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Chart 4
Hydraulic Brake System , Bendix (Freightliner)

Brake Control Module – The brake control module, which operates on 9 to 16 volts DC is active under any of the following conditions: (1) – when the ignition is on; (2) when the brake pedal switch is powered; (3) if the ignition is off, but the driver's door is open and the parking brake is not applied.

When the ignition is turned on, the control module starts a self test mode, which lasts from about one to three seconds. The warning lights and buzzer come on, then go off if the system is working all right. The module then goes into the active mode, monitoring the hydraulic brake system. If a problem is detected, the applicable input or output terminal is activated, and a warning light and buzzer come on.
The output terminals are activated as follows:

The "R" light (brake pressure – number 4 on Fig. 2.9) is activated when any of the following conditions exist:
- the flow switch on the power booster closes, due to a reduced flow of power steering fluid;
- the pressure differential switch on the master cylinder closes, due to a drop in pressure in either the front or rear brake system;
- the fluid level switch on the master cylinder reservoir closes, due to a drop in the fluid level;
- too much electrical resistance is in the backup pump motor.

The "P" light (parking brake – number 13 on Fig. 2.9) is activated when any of the following conditions exist;
- the parking brake is applied, and the ignition is on;
- the driver's door is open, the parking brake is not applied, and the ignition is off. This condition will also cause the control module buzzer to come on.

NOTE: The vehicle is equipped with two dash buzzers: one on the control module itself, which comes on when the "P" light (parking brake) is activated due to the driver's door being open and the parking brake not applied: and one mounted separately from the control module, which comes on when the "R" light (brake system pressure) is activated.
(Information reprinted with permission of Freightliner)

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CHART 3

FORD HYDRAULIC, MAXI BRAKE SYSTEM

NORMAL BRAKE SYSTEM CONDITIONS

Controls															
Engine		Ignition			Service Brake		Parking Brake				Service Brake		Electric Pump		
							Off		On		Light		Light		
Off	On	Off	On	Start	Off	On	Part Rel	Full Rel	Part Set	Full Set	Off	On	Off	On	
X		X			X			X	OR	X	X		X		X
X		X				X		X	OR	X	X			X	
X				X	X or X					X		X		X	
	X		X		X or X					X	X		X		X
	X		X		X or X		X				X		X		X
	X		X		X or X			X			X		X		X
	X		X		X or X				X		X		X		X
	X		X		X or X					X	X		X		X

* Whenever the ignition switch is in the START position, the Hydro-Max electric pump will cycle momentarily.

** Parking brake buzzer will sound momentarily during application of the parking brake in cold ambient conditions.

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A. INSIDE BUS
8. Windshield Wipers & Washers

Revised:

Items to be inspected & condition. **

	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Operation (Inspection Item #32 & 37)			
1) Inspect both wipers for:	1		
a) Swept area field of view and effectiveness of wiping.	a		a
b) Either blade is damaged, deteriorated, loose, or does not hold proper tension against windshield	b	b	
c) Air wipers cannot be manually parked out of driver's line of sight using control switch.	c	c	
2) Proper operation of both wipers on high and low speeds.	2		
a) Either wiper does not operate on Low speed.	a	a	
b) Either wiper does not operate on high speed.	b	b	
c) Either wiper does not operate on High or Low speed.	c		c
d) Either wiper motor or linkage is visibly damaged or loose.	d		d
3) Condition and mounting of switch(es) and knob(s).	3	3	
4) Electric wipers do not automatically return to parked position out of driver's line of sight when turned off.	4	4	
5) Air wipers cannot be manually parked out of driver's line of sight using control switch.	5	5	
6) Condition and mounting of wiper motors and linkage.	6	6	
7) Inspect for proper washer operation. Washer does not operate or is misadjusted (repair).	7	7	
Blades			
1) Inspect blades for condition, mounting, and tension.	1	1	
a) Either blade is damaged, deteriorated, or loose.			

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A. INSIDE BUS
9. Heaters, Defrosters, External Dash Fan(s)

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Heaters (Inspection Item #41)			
1) Inspect heater system for:	1		
a) Heating performance and water control valve (interior).	a		
b) *Heater cores, hoses, or valve leaks*	b	b	
c) Blower switches are damaged, loose, or blower operates intermittently (***Not producing adequate heat (including any auxiliary heat; repair).***	c	c	
Heater ductwork or heater box components are missing, damaged, loose, or obstructed (repair).			
d) Heater hoses are cracked, swollen or badly chafed.	d		
e) Water control valve hard to operate (repair).	e	e	
2) Blower operation, condition, and control switches.	2	2	
a) Heater blowers do not work on all speeds, are noisy, or vibrate.			
3) System leakage, condition, and hose shielding (shielding required starting November, 1980).	3	3	
a) Coolant leakage from heater cores, hoses, or valve leaks (including auxiliary heater).	a	a	
4) Condition of ductwork, diffusers and heater box.	4		
a) Any ductwork or diffusers are loose, missing or damaged.	a	a	
b) Any portion of heating system within passenger area creates sharp edges, projections, or other hazards to passengers.	b		b

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A. INSIDE BUS
9. Heaters, Defrosters, External Dash Fan(s)

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Defrosters (Inspection Item # 40)			
1) Airflow.	1		1
a) Heat.	a		
b) Coverage area.	b		
2) Blower operation, condition, and control switches.	2	2	
a) Blower switches are damaged or loose (repair).	a	a	
b) Any defroster blower does not work on either high speed or low speed.	b	b	
c) Any defroster blower does not work on high and low speed.	c		c
3) Condition of ductwork, diffusers, and fresh air control (if equipped).	3	3	
a) Any ductwork or diffusers are loose, or damaged or missing.	a	a	

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A. INSIDE BUS
9. Heaters, Defrosters, External Dash Fan(s)

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **

	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
External Dash Fan(s) (Inspection Item #39)			
1) Presence of fan(s), mounting and condition (Type "B," "C," and "D" only).	1		
a) Fan is not present or does not operate.	a		a
b) Fan mounting is loose or fan won't stay in adjustment	b	b	
c) Fan blade is damaged.	c	c	
d) One (1) speed does not function, or fan is noisy or vibrates.	d	d	
2) Protective cage mounting and condition.	2		
a) Protective cage is missing, loose, or damaged.	a		a
3) Operation and switch.	3		
a) Switch is loose or damaged .	a	a	

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A. INSIDE BUS
10. Dome & Stepwell Lights

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Dome and Stepwell Lights (Inspection Item #28 & 29)			
1) Check any lens for:	1		
a) Cracked or dirty.	a	a	
b) Broken.	b		b
2) Stepwell light does not operate properly.	2	2	
3) Switch mounting is loose, or knob is missing.	3	3	
4) Check driver's compartment dome lights (if equipped) for condition and operation (starting September, 1995).	4	4	

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A. INSIDE BUS
11. Service Door

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Operation (Inspection Item #31)			
1) Check service door assembly for operation, adjustment, condition, mounting, and fit.	1		
a) Door jams, binds, or is difficult to close or open.	a		a
b) Glass has been replaced with plexiglass, is broken, or is cracked.	b	b	
c) Door glass is fogged more than one (1) inch in from border.	c	c	
d) Door is equipped with any hasp or lock except factory approved system.	d		d
e) Door seals are not present.	e	e	
2) Control	2		
a) Check manual service door control and rod assembly for over-center or latching device, condition, mounting, and operation.	a	a	
3) Check air or vacuum powered service door control assembly for leaks, operation, insecure door in closed position, and emergency release.	3	3	
a) Air or vacuum door emergency release does not function, or control is broken.	a		a
b) Air or vacuum door opens or closes at an excessive rate or opens too slowly.	b	b	
Overhead Pad (Inspection Item #31)			
1) Check bus for pad that is a minimum three (3) inches wide, high density foam rubber padded safety cushion, mounted directly above the inside of the service door.	1	1	
a) Pad is missing or cover is severely ripped, exposing foam.	a	a	

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A. INSIDE BUS
12. Horns

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Horn(s) (Inspection Item #38)			
1) Check for operation of both horns.	1	1	
2) Check location and condition of horn switch.	2		
a) Horns are not audible at 500 feet.	a		
b) Horn button is not mounted in original O.E.M. location.	b	b	
c) Horn button sticks, or horn button operates intermittently such as when steering wheel is rotated.	c	c	

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A. INSIDE BUS
13. Mirror Adjustment, Condition

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Interior (Over driver) (Inspection Item # 33)			
1) Check interior rearview mirror for size, condition, and mounting.	1		
a) Interior rearview mirror is not at least 6" x 30" (except Type "A" shall be minimum of 6"x16" (IAC # 44.4(26)).	a		a
b) Mirror does not have rounded corners and protected edges.	b		b
c) Any portion of reflective surface is obstructed by stickers or other items or is deteriorated.	c		c
d) Mirror mounting is loose.	d		d

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A. INSIDE BUS
14. Driver's Seat and Belt

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Driver's Seat and Applicable Driver Restraint System (Inspection item #44 & 44a)			
1) **Check driver's seat and restraint system for specifications (type and adjustability), condition, mounting, and operation.** (Ref. I.A.C. 44.4 (36))	1		
a) *Driver's restraint system is missing.*	a		a
b) *Seat adjustment binds or is difficult to operate (repair). Driver's seat (non-air type) will not adjust four (4) inches fore and aft, four (4) inches up and down, or back will not tilt (Type "A" shall be manufacturer's standard).*	b		
c) *Seat adjustment is loose or adjustment hardware is missing.*	c		
d) *Seat belt retractor covers or belt covers are damaged , loose, or missing.*	d	d	
e) *Seat upholstery or foam is deteriorated or damaged.*	e	e	
f) *Driver's seat (air type) will not adjust seven (7) inches fore and aft, four (4) inches up and down, or back will not tilt (except Type "A" shall be manufacturer's standard).*	f		
g) *Non-O.E.M type of seat is installed.*	g		g
h) *Seat mounting is unstable, loose at floor, or seat mounting hardware is missing.*	h		h
i) *Mounting of retractors or belt guides is insecure.*	i		i
j) *Seat belt webbing or stitching is frayed or damaged.*	j		j
k) *Seat belt is routed improperly.*	k		
l) *Seat belt does not extend or retract freely.*	l		
m) *Seat belt buckle and tongue assembly does not latch or release properly.*	m		m

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A. INSIDE BUS
15. Passenger Seats

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Frames (Inspection Item #45)			
1) Inspect passenger seat frames for condition of welds, tubing, and hardware. Seat frames or welds are broken or cracked.	1		
a) Any seat back frame is repaired using non-O.E.M. hardware	a		a
b) Any seat frame hardware has been added or modified to result in projections or sharp edges.	b		b
c) Seat mounting at floor or seat rail is loose.	c		c
d) There is any non-O.E.M. seat frames installed.	d		d
e) Seat back padding is of wrong type for specific year model bus:	e	e	
f) Seat mounting fasteners are of lower grade or different type than O.E.M. fasteners for the specific locations.	f		
. **2) Mounting**	2		
a) Inspect condition of passenger seat mounting.	a		
3) Pads	3		
a) Inspect seat back foam for specifications and co	a	a	
b) April, 1977 to present-high back padded seats with padding that conforms with Federal Motor Vehicle Safety Standards (FMVSS) 222 (i.e., O.E.M. construction specifications).	b	b	
c) Original thickness or density of any seat back foam around frame has been significantly reduced due to wear, deterioration, or other factors.	c	c	
d) Foam envelope is split, delaminated, or broke down on corners.	d	d	
e) If there is any padding between any portion of seat back frame and cover missing,	e		e

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*30-Day = Repair within 30-days following inspection & report to D.E.
**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
15. Passenger Seats

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Cuts (and other upholstery damage).			
1) Inspect seat and stanchion (modesty panel) upholstery for condition and specifications.	1		
a) Any fire-blocking seat fabric is repaired using unapproved procedures (buses manufactured starting November, 1989).	a	a	
b) Any portion of seat back or bottom upholstery is missing exposing foam.	b	b	
c) Seat upholstery is cut, torn, or ripped more than six (6) inches .	c		c
e) Seat upholstery is cut, torn, or ripped less than six (6) inches.	d	d	
NOTE: (A) Punctures where no material is missing and no foam is exposed shall not be cause for removing bus from service.	**Note**		
(B) Tape used for seat repairs may be used for temporary repairs only.			

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A. INSIDE BUS
15. Passenger Seats

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Bottoms (cushions)			
1) Inspect seat bottoms (cushions) for securement and condition.	1		
a) Any seat bottom is not securely anchored to seat frame.	a		a
b) Any seat bottom has a protruding edge, or plywood is broken.	b		b
2) Modesty Panels and Stanchions (including Courtesy Panels).	2	2	
a) Inspect modesty panels (April, 1977 or newer crash barriers), stanchions, and courtesy panels for condition, specifications, mounting, and padding (as required). Any bus manufactured April, 1977 to present that does not have a padded safety barrier in front of any passenger seat that does not have another seat in front of it	a		a
b*) Stanchion padding is missing or is damaged so that metal is exposed.*	b		b
c) Stanchion mounting is loose.	c	c	
Optional Infant Seating			
Note*(if equipped) starting September, 1995.			
1) Check condition and operation of system.	1		1
a) Seat does not operate or function properly according to manufacturer's operational procedures.			

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A. INSIDE BUS
16. Emergency Door/Windows/Hatches

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Operation (Inspection Item #27)			
1) Inspect for operation and condition of rear emergency door and side door , door seal, emergency windows, and emergency exits/ventilator (roof hatches).	1		
a) Door hold open feature (if equipped) does not function or secure door in the open position.	a	a	
b) Weatherstrip does not seal.	b	b	
c) Door handle, latch, or mounting hardware is loose.	c	c	
d) Rear door opens too far, damaging lights.	d		
e) Door does not open at least 150 degrees.	e	e	
f) Mounting of guard for inside rear door handle is loose.	f	f	
2) Vandal Lock	2		
a) Bus will start with any emergency door locked (O.E.M. interlock system).	a		a
3) Roof Hatches	3		
a) Roof hatch seal is damaged or dislodged.	a	a	
b) Roof hatch does not open easily to full "emergency open" position.	b		b
4) Exit Windows	4		
a) Emergency window latch does not latch window securely.	a	a	
b) Window does not open.	b		b

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A. INSIDE BUS
16. Emergency Door/Windows/Hatches

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Buzzers (Inspection Item #27)			
1) Check operation of buzzers for emergency door and emergency exit windows.	1		
a) Buzzer system for emergency door or any exit window does not function or is not audible at driver's location.	a	a	
b) Buzzer operation is intermittent.	b	b	
c) Buzzer gives false alarms.	c	c	
Labeling and Pad (Inspection Item # 27)			
1) Inspect for label and opening instructions for emergency door, emergency windows, and emergency exit/ventilator (roof hatch).	1	1	
a) Roof hatches do not have instructions for operation on the inside of the hatch.	a	a	
b) Any emergency exit window does not have instructions for opening of the window.	b	b	
c) All emergency exits are not clearly labeled and visible inside and outside the bus as "Emergency Door" or "Emergency Exit" in 2" black lettering.	c	c	
d) Emergency door does not have readable instructions for operation on the inside of the door.	d	d	
2) Inspect emergency door header pad.	2		
a) Door pad is missing or has any protruding edge.	a		a
b) Door pad is ripped or has loose mounting.	b	b	

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A. INSIDE BUS
17. Windshield, Side & Rear Windows

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Glass Cracks (Inspection Item #32 & 46)			
1) Inspect windshield and all windows for cracks and other damage.	1		
a) There are any cracks in the windshield in the driver's direct field of vision (see Note below).	a	a	
b) There is any crack in the windshield or any window, greater than two (2) inches in length.	b	b	
c) There is any glass missing or damage obstructing the drivers field of vision.	c		c
d) There is any laminated windshield or laminated window glass broken or splintered which might cause injury when touched.	d		d
e) There is any window behind the driver's location which is not laminated or tempered safety glass .	e		e

Note: Driver's Field of Vision means the area cleaned by the swipe of the windshield wiper.

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A. INSIDE BUS
17. Windshield, Side & Rear Windows

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Fogging (Inspection Item #32 & 46)			
1) Check windshield and windows for fogging, reduced visibility, or improper level of tinting.	1		
a) Glass starting to fog around the edges.	a		
b) The windshield or any window is fogged more than two (2) inches in from the outer border.	b	b	
c) Any windshield or window fogging or clouding results in reduced visibility of a mirror.	c	c	
d) There is any reduced visibility through the windshield or any windows.	d	d	
e) There is tinting on the windshield or windows to the side of the driver which is not 70% light transmission or clearer.	e		
f) There is tinting or any windows behind the driver's location which is not 28% light transmission or clearer.	f		
2) Thermal Pane Windows	2		
a) Any fogging or collection of moisture between glass.	a	a	

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A. INSIDE BUS
17. Windshield, Side & Rear Windows

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Latches and Window Operation (Inspection Item #46)			
1) Check latches and windows for condition and operation.	1		
a) Latches are hard to operate, or any window does not move up and down freely.	a	a	
b) Windows do not stay closed.	b	b	
c) Latches are broken.	c	c	
d) *Window will not move (full travel) up and down*	d		d
Visor (Inspection Item #35)			
1) Check driver's sun visor for condition and operation.	1		
a) Driver's sun visor is too tight, loose, or cannot be adjusted.	a		
b) Driver's sun visor is cracked, damaged, clouded,or dirty.	b	b	
c) Sun visor is missing or has unauthorized stickers,tape or covering.	c		c

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
18. Wheelchair Lift Door & Securement System

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Wheelchair Lift, Door, and Securement System			
1) Operate lift through complete cycle and inspect for proper operation, condition, safety features, manual backup system, fluid leaks, mounting, barrier operation, warning light, buzzer operation, and overall mechanical condition.	1		
a) Dome light at inside lift area is inoperative (repair).	a		
b) Lift door or latch does not operate smoothly (repair).	b		
c) There is fluid seepage at the lift (note).	c		
d) White light at exterior lift area (if originally equipped) is inoperative (repair).	d		
e) Lift control cable or wiring is damaged or routed improperly (repair).	e		
f) There is excessive side play (more than two (2) inches), in the lift mechanism when the platform is partially or fully extended.	f		
g) Door switch (to prevent lift operation when the lift door is closed), or other safety override features do not function.	g		
h) The lift jacks the vehicle.	h		
2) Inspect wheelchair and occupant securement (tie-down) system for condition, mounting, proper type, and location.	2		
a) Track is filled with dirt.	a		
b) Elevator lift platform is not flush with floor in "up" position.	b		
c) Lift on 1989 or later buses (large end barrier-type lift) is not equipped with frame padding.	c		
d) Any part of the lift mechanism or hardware is damaged, missing, or not secure including cams, clips, pins, rollers, and platform fasteners.	d		
e) Manual backup system does not function properly.	e		
f) Wheelchair tie down track or fasteners are loose, broken, or sections of track are not continuous within each wheelchair position (Pre-1989 only).	f		
g) Wheelchair or occupant securement straps are broken, frayed, or will not operate.	g		

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
18. Wheelchair Lift Door & Securement System

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
3) Securement system for buses built between October, 1983 and November, 1989 is not side facing track and belt system meeting Iowa Specifications.	3		
a) Securement systems for buses built after November, 1989 is not forward facing wheelchair and occupant securement system meeting Iowa specifications.	a		a
b) Wheelchair or occupant securement track is mounted using lag bolts or sheet metal screws.	b		b

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
19. Interior Wiring, Cab Hoses, & Fire Wall Seals

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Interior Wiring			
1) Inspect visible wiring for mounting, condition, chafing/abrasion, corrosion, loose connectors, or improper repairs.	1		
a) Wiring or connectors are unsecured, corroded.	a		
b) Wiring improperly routed.	b		b
Cab Hoses			
1) Inspect all hoses for leaks, condition, routing/abrasion, and presence of heater hose shielding.	1		
a) Hose is weathered, cracked, abraded, or routed improperly .	a		
b) There is any unshielded heater hose in the driver's compartment (starting November, 1980).	b		
c) Any visible anti-freeze leak inside passenger compartment.	c		c
Firewall Seals			
1) Inspect firewall for any cracks, unsealed openings, and sound insulation material.	1		
a) Sound deadening/insulation package is unsecured or deteriorated .	a		
b) Any unsealed hole or open area in the firewall.	b		b

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**All Items in these columns may be Inspected at the Inspector's discretion

A. INSIDE BUS
20. General Condition, Bus Interior

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Floor (Inspection Item # 47)			
1) Inspect floor covering, plywood subfloor, aisle, and cove molding strips for condition, adhesion and/or fastening holes or cracks, and ribbed rubber on aisle.	1		
a) Rubber floor covering is loose, deteriorated, or cracked	a	a	
b) Plywood is rotten or soft	b	b	
c) There is any damage to rubber floor covering which could cause a tripping hazard.	c		c
d) Cove molding is loose or fasteners are missing.	d	d	
e) There are any unsealed holes or cracks through to underside of bus.	e		e
f) Aisle is not equipped with 12 inch wide ribbed rubber.	f	f	
Step Well			
1) Inspect step well condition.	1		
a) Watch Your Step" decal missing or unreadable (flat floor equipped buses only).	a	a	
b) Check type and condition of stepwell and tread.	b	b	
c) Stepwell tread and leading edge at aisle is not flush and securely adhered, causing a tripping hazard.	c		c
d) Stepwell tread ribbing at edge is worn smooth more than four (4) inches in width.	d	d	
e) Stepwell support structure is broken, or stepwell is rusted through.	e		e
f) The stepwell area has been damaged or weakened to the extent that a hazard exists.	f		f

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A. INSIDE BUS
20. General Condition, Bus Interior

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Grab Rail(s) (Inspection Item #48a)			
1) Check for presence and secure mounting of entrance grab rail(s).	1		
a) Entrance grab rail(s) is missing or not securely mounted.	a		a
b) Hand rail fails "Connecticut String and Nut Test."for snagging.	b		b
Paneling			
1) Check all interior sidewall, rear, ceiling, and driver's area paneling for secure fastening, projections or sharp edges, and condition.			
a) There is graffiti or unauthorized stickers on interior panels	a	a	
b) Interior paneling is mildewed, or paint (where required) is missing or damaged.	b	b	
c) Sharp edges, rust-through, or projections from paneling exist which could cause injury to passengers or driver.	c		c
d) There are any non-flush mounted speakers (except trim rings) or any other unauthorized items affixed to the interior panels in the passenger area.	d	d	
e) There are loose or missing attachment screws on any light bar panel or other maintenance access panel.	e	e	
NOTE: Hanger Loops			

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A. INSIDE BUS
20. General Condition, Bus Interior

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Broom Mounting			
1) Check securement and location of broom.	1		
a) Broom is not securely mounted in the driver's compartment.	a	a	
Loose Objects Secured			
1) Check to see that all objects within the bus are secured.	1		
a) Loose objects and other objects which are not secured in a glove box or other secured container.	a		a
b) Any aerosol cans or other containers or liquids of flammable or volatile chemicals are on the bus.	b		b
c) Any aerosol can is not labeled.	c		
Dog House/Engine Cover			
1) Inspect dog house/engine cover for seals, sound proofing, weather stripping, prop-rod and latch operation.	1		
a) Sound proofing is not present or deteriorated (repair).	a		
b) Seals or weather stripping allow air/fume leaks into driver's compartment.	b		b
c) Prop-rod does not support dog house/engine cover safely.	c		
D Latch is hard to operate or does not secure dog house/engine cover properly.	d		d
Trash Container/Holding devise			
1) Check to see that the trash container meets FMVSS 302 standards and that the container is secured with a proper devise as out lined in IAC 44.4(49).	1		
a) If equipped, trash container must be secured.	a		a

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B. OUTSIDE BUS
1. Headlights, Turn Signals, Hazard, Side Marker, Brake Tail, Backup Lights, Backup Alarm (if equipped), and Park Lights

Revised:

Inspection Responsibility/Result

Items to be inspected & condition.**	(School) Repair	(Dept. of Education) 30-Day*	O.O.S.*
Headlights (Inspection Item #9)			
1) Check both headlights for brightness, operation, condition of sealed beams, and visible misaiming.	1		
a) Check high beam indicator operation and headlight switch.	a	a	
b) Either sealed beam does not light on low and high.	b		b
c) Any sealed beam lens is fogged, cracked, or light is dim.	c	c	
d) Dimmer switch sticks, is hard to operate, or doesn't function.(OOS)	d		
e) Either sealed beam does not light on low or high.	e	e	
Turn Signals (Inspection Item #10 & 17)			
1) Check turn signals (including bulbs and lenses) for operation, condition, and specifications . Turn signals mounted on top of front fenders (type "C" only) are permissible.	1		
a) Turn signal does not flash between 60 and 120 times per minute.	a		a
b) Bus is manufactured since August 1988 over 10,000 lb. GVWR and all type D buses and is not equipped with side-mounted turn signals.	b		b
c) Turn signal switch does not function properly or will not maintain set position.	c		c
d) Turn signal indicator does not properly indicate right and left.	d		d
e) Turn signal does not cancel or return to neutral position.	e		e
f) Any front, rear, or side-mounted turn signal lens on busesbuilt since November 1998 is not amber.	f		f
g) Any front, rear, or side-mounted turn signal lens is damaged and white light is visible.	g		g
h) Any front, cowl mounted, top of fender, rear, or side-mounted turn signal does not flash.	h		h
i) Any front, rear, or side-mounted turn signal lens is cracked.	i		i

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B. OUTSIDE BUS
1. Headlights, Turn Signals, Hazard, Side Marker, Brake Tail, Backup Lights, Backup Alarm (if equipped), and Park Lights

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hazard			
1) Check side marker lights (if installed) for operation and condition.	1		
a) Hazard lights do not flash between 60 and 120 times per minute.	a	a	
b) Switch does not function or will not maintain set position.	b	b	
Side Marker			
1) Check side marker lights (if installed) for operation and condition.	1	1	
Brake (Inspection Item #16)			
1) Check brake lights and lens(es) for operation, condition, and specifications .	1	1	1
a) Any brake light lens is not red or is not proper type meeting SAE specification.	a	a	a
b) Any 10 capacity or larger bus built since November, 1980 is not equipped with two (2) seven (7) inch and two (2) smaller brake lights.	b		b
c) Brake lights on one or both sides fail to function when Brake pedal is depressed.	c		c
d) Any brake light lens is cracked.	d	d	
e) Any brake light lens is damaged and white light is visible.	e		e
f) After brake pedal is released, brake light switch sticks, or lights stay on.	f		f
Tail (Inspection Item # 15)			
1) Check tail light(s) and lens(es) for operation, condition, and specifications.	1		
a) Any tail light lens is not red or is not proper type meeting SAE specifications.	a		a

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B. OUTSIDE BUS
1. Headlights, Turn Signals, Hazard, Side Marker, Brake Tail, Backup Lights, Backup Alarm (if equipped), and Park Lights

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Tail (cont.)			
b) Any tail light lens is cracked.	b	b	
c) Any tail light lens is damaged and white light is visible.	c		c
d) One (1) tail light on either sides fails to function (four(4) tail light system only.	d	d	
e) Both tail lights on one (1) side fail to function when headlight switch is in either the park or headlight positions (four (4) tail light system).	e		e.
f) One tail light on either side fails to function (two(2) tail light system.	f		f
g) Any 10 capacity or larger bus built since November, 1980 is not equipped with two(2) seven(7) inch and two(2) smaller tail lights.	g		g

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** All Items in these columns may be inspected at the D.E. Inspector's discretion.

B. OUTSIDE BUS
1. Headlights, Turn Signals, Hazard, Side Marker, Brake Tail, Backup Lights, Backup Alarm (if equipped), and Park Lights

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Backup Lights (Inspection Item # 21b)			
1) Check for operation of back up lights.	1		
a) One back up light does not work	a	a	
b) All back up lights do not work	b		b
c) Any backup lens is cracked.	c	c	
d) Backup light(s) stays on all the time or stays on in any gear position other than reverse.	d		d
e) Any 10 capacity or larger bus built since August, 1988 is not equipped with two(2) seven(7) inch backup lights.	e		e
Backup Alarm			
1) Check for presence of back up alarm (buses manufactured starting November, 1998) .	1		
a) Check operation of alarm by placing transmission in reverse (engine running) and listening for alarm sound.	a	a	
Park Lights			
1) Check park lights for proper operation and condition .	1		
a) One or any of the park lights do not work	a	a	
b) Any park light lens is cracked or damaged	b	b	
c) Parking lights do not function in park or headlight positions	c	c	

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B. OUTSIDE BUS
1. Headlights, Turn Signals, Hazard, Side Marker, Brake Tail, Backup Lights, Backup Alarm (if equipped), and Park Lights

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Clearance and ID lights (Inspection Items #12, 13,19 & 20)			
1) Check light(s) and lens(es) for operation, condition, and location. Also check license plate light.	1		
a) Any clearance light switch is hard to operate, sticks, or knob is missing (repair).	a		
b) Clearance lights on buses manufactured starting September, 1985 do not operate off the headlight switch in "park" or "headlight" positions.	b		
c) Any bus over 30' in length is not equipped with intermediate amber clearance light on the sides	c	c	
d) Any rear clearance or ID light lens is not red, or any intermediate or front lens is not amber.	d	d	
e) Any clearance or ID light fails to function.	e	e	
f) Any clearance or ID light is damaged or white light is visible.	f	f	
g) License plate light is inoperative.	g		

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B. OUTSIDE BUS
2. Clearance & ID Lights, Reflectors Strobe Light (if equipped)

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Reflectors (Inspection Item #14)			
1)Check reflectors for condition and location.	1		
a) Reflectors are not mounted at a height not to exceed 42 inches nor less than 30 inches above the ground on which the vehicle stands.	a	a	
b) Reflectors are required as follows:	b	b	
1) Buses over 30' in length: two (2) red on rear, one (1) red on each side at rear, one (1) intermediate amber on each side, and one (1) amber at front right side behind entrance door and at a similar location on the left side.			
2) Buses under 30' in length: same, except intermediate amber is not required.			
c) Any reflector is damaged or cracked.	c	c	
d) Any required red reflector is faded, significantly affecting its original color.	d	d	

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B. OUTSIDE BUS
2. Clearance & ID Lights, Reflectors Strobe Light (if equipped)

Revised:

Inspection Responsibility/Result

Items to be inspected & condition.**	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Strobe Light (Inspection Item #21)			
1) Check roof mounted white flashing strobe light for operation, location, and condition.	1		
a) Any bus manufactured is not equipped with a roof mounted white flashing strobe light mounted 1 to 10 feet from the rear center of the bus. The strobe light is to be located to the rear of the rearmost emergency roof hatch.	a		a
b) Check that strobe light works properly	b		b
c) Strobe light pilot light fails to function	c		

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B. OUTSIDE BUS
3. Pupil Warning Lights

Revised:

Inspection Responsibility/Result

Items to be inspected & condition.**	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Pupil Warning Lights (Inspection Item #11 & 18)			
1) Check pupil warning lights for operation and condition.	1		
NOTE: Pupil warning light hoods front and rear are optional starting September, 1993.			
a) Any pupil warning light is not red (outer) or amber (inner) or is not proper type meeting SAEJ760 (December, 1974), SAE specifications (June, 1976), and SAE specifications May, 1982 (Revised May, 1982).	a		a
b) Any pupil warning light does not light	b		b
c) *Any pupil warning light hood (if equipped) is damaged so that it obstructs visibility of the light.*	c		c
d) Either pupil warning light pilot light fails to function.	d		d
e) *Amber/red lights (front and rear) do not alternately flash (side to side)*	e		e
f) Any pupil warning light lens is damaged and white light is visible	f		f
g) Any pupil warning light lens has darkened, faded, is misaimed, or is dirty, affecting the color of the light or reducing the visibility to less than 500 feet in bright sunlight.	g		g

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B. OUTSIDE BUS
4. Stop Arm(s)

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Arm(s) (Inspection Item # 24 & 24b)			
1) Check stop arm(s) for specifications, operation (fully extends to 90 degrees), and condition.	1		1
a) Any stop arm light does not flash or does not flash between 60 and 120 times per minute.	a		a
b) Hinge or bushing(s) is dry of lubrication (repair).	b		b
c) Stop arm assembly or blade mounting is loose (repair).	c		c
d) Stop arm extends more or less than 90° (degrees) (repair).	d		d
e) Stop arm(s) not of proper type and specifications:	e		e
1) Octagonal.	1		1
2) Flashing red lights, start July 1979	2		2
3) Reflective white border and lettering, start July, 1979	3		3
4) High intensity reflectivity, starting July 1979	4		4
f) Any stop arm (paint or decal) is significantly faded or discolored.	f	f	
g) Any stop arm has an air or vacuum leak	g		g

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B. OUTSIDE BUS
4. Stop Arm(s)

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Student Crossing Arm (if equipped) (required starting November 1998 production).			
1) Check front bumper mounted student crossing arm for operation, condition, and mounting.	1		
a) Not equipped with student crossing arm, starting November, 1998 for Type A-1, B, and C School Buses	a		a
b) Cross gate does not work / extend.	b		b
c) Crossing arm must extend minimum of 70 inches forward from attachment point on bus	c	c	

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B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Mirrors (Inspection Item # 34)			
1) Check all exterior mirror mounting and bracketry for tightness and condition.	1		
a) Brackets broke or loose	a	a	
b) Mirrors or brackets missing	b		b
Rear-view Mirrors (Inspection Item #34)			
1) Check exterior rearview mirrors for specifications, condition, mounting, and adjustment. (IAC #44.4(26))	1		
a) See edge of rear tire at ground level.	a		
b) Any mirror does not meet applicable regulations as to type and size.,	b		b
c) Any exterior rearview mirror or bracket is broken, cracked, or loose in frame or reflective surface is deteriorated.	c		c
Convex (Inspection Item # 33 & 34)			
1) Check convex crosswalk and side-view mirrors for specifications (correct type, size, and location) condition, mounting, and adjustment. Mirrors do not meet specifications for bus manufacture dates as shown as per FMVSS III:	1		
a) Required convex mirrors are not present.	a		a
b) Any mirror is cracked, broken, or loose in frame.	b		b
c) Any mirror is out of adjustment.	c		
d) Any mirror reflective surface is deteriorated.	d		d
e) Any portion of mirror mounting system is loose or broken.	e		e
Bumpers			
1) Check bumpers for mounting, condition, color, and body seal (rear bumper).	1		
a) Bumper not black or black with diagonal reflective striping	a	a	
b) Bumper damaged as to not having original manufactured shape	b	b	
c) Bumper is equipped with any unauthorized stickers or decals	c		

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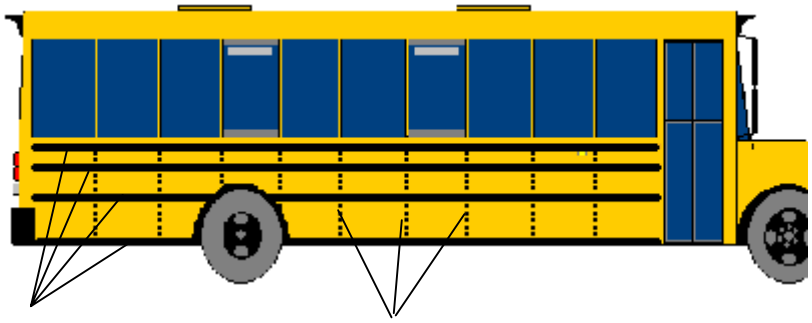
B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Mudflaps			
1) Check mudflaps for mounting, condition, and size.	1		
a) front mudflaps – required 1979 to present	a	a	
b) rear mudflaps – required 1988 to present	b	b	
Body Condition (Inspection Item # 55)			
1) Check body exterior for accident damage, scratches, dents, rust, etc.	1		
a) Check that no body damage has sharp edges or protrusions that could present a snagging or hazard to people or students around the exterior of the vehicle.	a	a	
b) Body panels, rivets, or other components are damaged or corroded to the point where joint strength or body structural integrity is compromised.	b		b
c) Body has rust through areas on body panels or water leaks	c	c	

NOTE: A sufficient repair for item 1 b would be a complete body panel replacement.

A sufficient repair for item 1 c would include a patch installed from body bow to body bow and placed behind the rubrails on the school bus body.



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B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Paint (Inspection Item #22)			
1) Check paint on body and trim for required coloration and condition.	1		
a) Must be national school bus glossy yellow	a	a	
b) All trim must be glossy black	b	b	
Reflective Markings (if equipped)			
1) Check reflective markings for coloration, reflectability and condition. Reflective markings required starting September, 1995.	1		
a) Reflective material must not be peeling or flaking off.	a	a	
2) Check for presence of reflective markings around any emergency exit, door, window, or roof hatch as required by F.M.V.S.S. 217 (buses purchased after November, 1993).	2	2	

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B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition.**

	Repair	30-Day*	O.O.S.*
Lettering (Inspection Item #23 & 26)			
1) Check all lettering for required type, size, location, and color. Ref. IAC 44.4(20) Identification	1		
2) Bus is not equipped with following lettering:	2		
a) Eight inch (8") "SCHOOL BUS" front and rear with reflective background	a	a	
b) Five inch (5") minimum and seven inch(7")maximum' '_____ Community School District" left and right sides of body.	b	b	
c) Local bus number (front, rear, and both sides).	c	c	
d) Minimum two inch (2") lettering "Emergency Door" at top or above door both inside and outside the bus.	d	d	
e) Emergency window(s) or hatch(es) labeled "Emergency Exit" from inside and outside	e	e	
f) Any required lettering is not black	f	f	

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B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Emergency Door Operation			
1) Check emergency door for operation from exterior of bus.	1		
a) Emergency door latch mechanism requires more than 40 pounds to release.	a	a	
b) Emergency door handle is mounted (e.g. horizontally) to allow "hitching" onto the bus.	b	b	
c) Emergency door is hard to open fully from outside the bus	c	c	
Engine Hood			
1) Check engine hood for operation, condition, and safety latch.	1		
a) Hood is misaligned (repair).	a		
b) Hood hinges are not lubricated or are damaged (repair).	b		
c) Hood cannot be opened as designed.	c		
d) Safety latch does not secure hood, is not lubricated, or is damaged.	d		
e) Hood prop rod(s) or hold-open feature does not function properly.	e		

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B. OUTSIDE BUS
5. General Condition, Bus Exterior

Revised:

Items to be inspected & condition.**	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Cleanliness (Inspection Item #57)			
1)Check exterior of bus for cleanliness.	1 2		
2)Exterior of bus is dirty (note). a) *Bus is dirty to the point visibility through any window or light lens is significantly reduced.*	a	a	

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C. ENGINE COMPARTMENT
1. Steering

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Play (Inspection Item # 56)			
1) Check for play in the steering system, at the steering wheel, using the following procedures:	1		
a) Visual check - from inside bus with engine running, rotate steering wheel lightly from side to side until the turning motion can be observed at tires and note free play (lash) at steering wheel outer diameter. This procedure must be performed with the vehicle on the ground.	a		
b) To check power assist operation run engine at fast idle and turn steering wheel a full right and left turn and feel for binding, jamming, or belt slippage.	b		
c) Steering wheel plastic is cracked (repair).	c		c
d) Free play (lash) exceeds amounts specified in Chart 8, page 73.	d		d
e) Plastic is cracked or missing so that metal steering wheel reinforcement is exposed.	e		e
f) Steering wheel is loose on column.	f	f	f
g) Steering wheel is non-O.E.M. design.	g	g	g
h) Power assist is inadequate, or there is binding, jamming, or *belt slippage.*	h	h	h
Column (Inspection Item # 56)			
1) Check steering column inside bus for up and down play (parallel to shaft), side to side play (perpendicular to shaft), and for proper mounting.	1		
a) Side to side play in steering column exceeds 1/4 inch or up and down play exceeds 1 inch.	a		a
b) Column assembly mounting (including floor mounting plate) or fasteners are loose.	b		b
c) Steering column U-joint inside the bus (if equipped) is loose, damaged, or noisy after lubrication)	c		
d) Tilt/telescopic assembly (if equipped) will not stay locked in position.	d		
e) Firewall rubber boot at floor (if equipped) is torn, or ripped, or missing.	e		e
f) Column U-joint (if equipped) is loose, damaged, or noisy after lubrication.	f		f

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CHART 8

STEERING WHEEL PLAY (LASH) MEASUREMENTS

Steering Wheel Size	Wheel Size:
15 inches - 1 3/4” (4.4 cm)	16 inches or less - 1/4” (6.5 mm)
16 inches - 2” (5.1 cm)	17 to 18 inches - 3/8” (9.5 mm)
18 inches - 2 1/4” (5.7 cm)	Over 18 inches - 1/2” (13 mm)
20 inches - 2 1/2” (6.4 cm)	
22 inches - 2 3/4” (7.0 cm)	

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C. ENGINE COMPARTMENT
Steering

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
g) Flexible coupling, if equipped (rag joint) has loose or missing fasteners, damaged flexible disc, or elongated holes.	g		g
h) Any column U-bolt, pinch bolt, other column fasteners, or input shaft coupling is loose, damaged, or missing.	h		h
i) Pot joint (shell coupling) rubber is damaged or torn.	i		i
j) Pot joint if equipped (shell coupling) is loose.	j		j
k) Pot joint (shell coupling) rubber is missing.	k		k
l) Steering gear box is loose on frame, or fasteners, or lock tabs are loose or missing.	l		l
m) Frame braces or crossmembers are cracked.	m		m
n) Rivets or other fasteners at frame braces or crossmembers are loose or missing.	n		n
o) Any axle or suspension component is loose beyond specifications prescribed elsewhere in this manual.	o		o
2) Steering Gear Box and other external components will be checked using the following procedure:	2		
a) Vehicle should be on ground (not suspended).	a		
b) With engine running have assistant move steering wheel back and forth repeatedly to load steering components.	b		
c) Visually observe the following external steering and related suspension and frame components for looseness while assistant works steering (also see specific procedures under each component):	c		
1) Column shaft and hardware.	1		1
2) Column U-joints or flexible coupling (as equipped).	2		2
3) Coupling at gear box.	3		3
4) Gear box.	4		4
5) Pitman arm.	5		5
6) Drag link.	6		6
7) Steering knuckle or arms.	7		7
8) Tie rod ends.	8		8
9) Idler arm (as equipped)	9		9
10) Vehicle frame crossmembers and frame cross-members and frame braces (including associate rivets and fasteners for looseness and condition).	10		10

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C. ENGINE COMPARTMENT
1. Steering

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **	Repair	30-Day*	O.O.S.*
d) Have assistant carefully operate steering to full left and right turn and check for power assist pop-off and steering stops.	d		
e) As follow-up to the above steering check, also perform a visual and hands-on check of each of the listed components. See the following details on page 78 through page 80.	e		
NOTE TIGHTENING STEERING COLUMN JOINT BOLTS WARNING – FAILURE TO MAINTAIN THE STEERING SYSTEM IN PROPER CONDITION CAN CAUSE REDUCED STEERING ABILITY RESULTING IN PERSONAL INJURY AND PROPERTY DAMAGE. As good maintenance practice, it is recommended that Steering column joint bolts be checked for tightness every 80,000 km (50,000 miles or annually, whichever occurs first. DO NOT OVER TIGHTEN.			

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C. ENGINE COMPARTMENT
1. Steering

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Steering Gear Box Mounting (Inspection Item # 56)			
1) Check mounting, condition, and tightness of steering gear box,and check frame, frame braces, and associated rivets or fasteners for looseness and condition.	1		
a) *There is any binding in steering gear box.*	a		a
b) *Steering gear box is loose.*	b		b
c) *Frame, frame braces, and associated rivets or fasteners are loose, damaged, or missing.*	c		c
Pitman Arm (Inspection Item # 56)			
1) Check Pitman arm for condition.	1		
a) *Any play is observed between pitman arm and sector shaft.*	a		a
b) *Pinch bolt at sector shaft is loose or missing.*	b		b
c) *Pitman arm is cracked or damaged.*	c		c
d) *Check the pitman arm for looseness or misalignment at sector shaft splines and looseness at all joint.*	d		d
e) *Check looseness of pinch bolt and fasteners and condition of pitman arm.*	e		e
f) *Pitman arm grease fitting (if originally equipped) is loose or missing*	f	f	
g) *Pitman arm to sector shaft timing marks are misaligned.*	g		g
h) *Pitman arm ball-joint (if equipped) has more than 1/16 inch play (axial, i.e., in and out play between the ball stud and socket).*	h		h
I) *Pitman arm ball-joint (if equipped) has loose or missing nut, or cotter pin is missing.*	i		i

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C. ENGINE COMPARTMENT
1. Steering

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Drag Link (Inspection Item # 56)			
1) Inspect Drag Link for any of the following problems	1		
a) Drag link ball stud is loose in pitman arm or upper steering arm	a		a
b) Any nut is loose or missing, or cotter pin is missing	b		b
c) Drag link shaft is damaged or bent.	c		c
d) Check the drag link ends, shaft, and fasteners for looseness and condition (on vehicles with I-beam suspension).	d		d .
e) Any drag link end grease fitting (as equipped) is loose, or missing, or will not take grease.	e	e	
f) Drag link end boot is damaged or missing.	f	f	
g) Drag link needs lubrication).	g	g	
h) Drag link dust boot (as originally equipped) is cut, damaged, or missing.	h	h	
i) Drag link end (nonadjustable type) has more than 1/16 inch axial play.	i		i
j) Horizontal socket type (adjustable) drag link end has more than 1/16 inch axial or lateral play.	j		j
Steering Arm (Inspection Item # 56)			
1) Check upper steering arm (Ackerman arm) and left and right side lower steering arms for securement and condition.	1		
2) Check condition and securement of steering stops and lock nuts.	2		
a) Any steering arm has been bent, is cracked, or is damaged.	a		a
b) Any steering arm attachment point is loose, or any fasteners, or cotter pin is missing.	b		b
c) Either steering stop or lock is loose, damaged, or missing.	c		c

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C. ENGINE COMPARTMENT
1. Steering

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Tie Rod and Ends (Inspection Item # 56)			
1) Check tie rod ends, tie rod, dust boots, and clamps or fasteners (as equipped) for looseness, damage, and condition.	1		
a) Tie rod end dust boot is cut, damaged, or missing.	a	a	
b) Tie rod end needs lubrication.	b	b	
c) Any tie rod end grease fitting is loose, or missing, or will not take grease.	c	c	
d) Any tie rod end has more than 1/16 inch axial play	d		d
e))Tie rod clamps, fasteners, or cotter pin is stripped, missing, or loose.	e		e
f) Any clamp (as equipped) is mispositioned.	f		f
g) Any tie rod or end is cracked or damaged.	g		g
h) Tie rod end ball stud is loose in steering arm or idler arm.	h		h
2) Idler Arm (Inspection Item # 56)	2		
a) Check idler arm assembly (as equipped) for looseness, damage, and condition.	a		
b) Idler arm needs lubrication	b		
c) Idler arm grease fitting is loose, or missing, or will not take grease.	c		
d) Idler arm up and down play is greater than 1/4 inch total (1/8 inch either direction).	d		d
e) Any idler arm fasteners are loose or missing.	e		e
f) Idler arm is cracked, or damaged, or cotter pin is missing.	f		f

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C. ENGINE COMPARTMENT
2. Batteries

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Holddown (Inspection Item # 55)			
1) Check for tightness, condition, and type of battery holddown.	1		
a) Holddown assembly or tray is loose, corroded, or damaged causing insecure mounting of battery.)	a		a
b) Holddown is a flexible strap or other non-rigid design.)	b		b
Battery Terminals (Inspection Item #55)			
1) Check terminals for cleanliness, tightness, and condition.	1		
a) Any terminal is loose, damaged, corroded, or has missing hardware.	a		a
b) Any positive terminal has missing insulation.	b		b
Battery Cables (Inspection Item # 56)			
1) Check cable assemblies for routing, securement, condition, and size.	1		
a) Cable or insulation is cracked or damaged, or cable is corroded.	a		a
b) Cable is routed against the exhaust or any other extremely hot surface.	b		b
c) Cable is smaller than original equipment size.	c		c
d) Cable appears to be too small in diameter or of excessive length (See Chart 9, page 84).	d		d
e) Cable is misrouted, unsecured, or grommet is missing to allow it to abrade on any metal or sharp edge.	e		e
f) Flat braided engine ground cable is frayed, corroded, or ends are not secure.	f		f

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C. ENGINE COMPARTMENT
2. Batteries

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Cleanliness (Inspection Item # 56)			
1) Check cleanliness of battery(ies)	1		
a) Battery top or sides are corroded, greasy, dirty or wet with electrolyte (repair).	a	a	
b) Battery is cracked or damaged. (OOS)	b		b
Tray (Inspection Item # 56)			
1) Check battery tray for operation, condition, and securement.	1		
a) Battery slide tray is corroded or dirty, or hard to slide in and out (repair).	a	a	
b) Battery tray does not slide in and out. (OOS)	b		b
c) Battery box door does not open or will not stay latched. (OOS)	c		c
d) Battery slide tray securement device or tray stop is missing or nonfunctional. (OOS)	d		d
e) Battery slide tray or box is damaged or deteriorated reducing security of battery(ies). (OOS)	e		e
Electrolyte Level (Inspection Item # 8)			
1) Check electrolyte in battery(ies) for proper level (if applicable).	1		
a) Electrolyte is low (repair).	a	a	
b) Electrolyte is too low exposing plates. (OOS)	b		b

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SYSTEM VOLTAGE	RATED OUTPUT IN A AMPERES	RECOMMENDED MINIMUM CHARGING CABLE GAUGE SIZE							
		UP TO 4 FT.	4 TO 7 FT.	7 TO 10 FT.	10 TO 13 FT.	13 TO 16 FT.	16 TO 19 FT.	19 TO 22 fFT	22 TO 28 FT.
12 VOLT	0 - 20	14	12	12	10	10	8	8	8
	20 - 35	12	10	8	8	6	6	6	4
	35 - 50	10	8	8	6	6	4	4	4
	50 - 65	8	8	6	4	4	4	4	2
	65 - 85	6	6	4	4	2	2	2	0
	85 - 105	6	6	4	2	2	2	2	0
	105 - 125	4	4	4	2	2	0	0	0
	125 - 150	2	2	2	2	0	0	0	00

MAXIMUM DIFFERENCE BETWEEN BATTERY VOLTAGE AND ALTERNATOR VOLTAGE IS 0.5 VOLT FOR 12 VOLT SYSTEMS AT FULL RATED OUTPUT.

MAXIMUM VOLTAGE DROP IN THE SENSE (#2-TERMINAL-LEAD) MUST NOT EXCEED 0.2 VOLT FOR 12 VOLT 3-WIRE SYSTEMS.

CABLE GAUGE SIZE CALCULATION TAKES INTO ACCOUNT TERMINAL CONNECTION RESISTANCE.

WHEN AN INSULATED (NO FRAME GROUND) CHARGING SYSTEM IS INSTALLED, LENGTH OF RETURN CIRCUIT MUST BE INCLUDED TO OBTAIN TOTAL CIRCUIT LENGTH TO DETERMINE PROPER WIRE SIZE.

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C. ENGINE COMPARTMENT
2. Batteries

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Load Test (Optional) (Inspection Item # 8)			
1) Perform battery load test on battery(ies) to check condition. Check battery(ies) for proper type and load rating.	1		
a) Battery cable length or battery mounting restricts access to battery(ies) for servicing	a	a	
b) Battery(ies) is of insufficient CCA rating.	b		b
c) Battery fails load test (See Chart 10, this page).	c		c

BATTERY TEST
Remove surface-charge:
Discharge at 300 amps for 15 seconds.
Check for blue haze or smoke.
TEST
Measure electrolyte temperature. Discharge at ½ the CCA rating of the battery for 15 seconds.
Battery voltage must not drop below the listed values during the 15 second test.

Degrees in F	Min. Voltage
70 or over	9.6
66	9.5
50	9.4
40	9.3
30	9.1
20	8.9
10	8.7
0	8.5

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C. ENGINE COMPARTMENT
3. Fluid Levels and Conditions

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Brake Fluid (Inspection Item # 56)			
1) Check brake fluid and brake power-assist hydraulic fluid (if equipped) for level and condition.	1		
a) Level of brake fluid in either side of master cylinder reservoir is lower than 1/4 inch from top or below "Add" mark (if equipped).	a		a
b) Brake fluid or power-assist fluid shows evidence of excessive water, oil, or dirt contamination.	b		b
c) Brake power-assist hydraulic fluid is below cold "Add" mark.	c		c
Power Steering Fluid (Inspection Item # 56)			
1) Check power steering fluid level and condition.	1		
a) Power steering fluid is below cold "Add" mark.	a		a
b) Power steering fluid shows evidence of excessive water, oil, or dirt contamination	b		b
Oil (Inspection Item # 56)			
1) Check level and condition of oil.	1		
a) Engine oil is below "Add" mark).	a	a	
b) No oil is observed on dipstick.	b		b
c) There is evidence of fuel or water contamination in the oil.	c		c
d) Dipstick is missing.	d		d

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C. ENGINE COMPARTMENT
3. Fluid Levels and Conditions

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)

Items to be inspected & condition. **

	Repair	30-Day*	O.O.S.*
Transmission Fluid (Inspection Item # 56)			
1) Check level and condition of transmission fluid.	1		
a) Transmission fluid is below "Add" mark (repair).	a	a	
b) Transmission fluid shows evidence of excessive water or dirt contamination (repair).	b	b	
c) Transmission fluid shows need of servicing (discoloration and/or burnt smell) (repair).	c		c
d) Transmission fluid is not present on dipstick. (OOS)	d		d
e) Transmission fluid above full mark (overfilled). (OOS)	e		e
f) Dipstick missing. (OOS)	f		f
Windshield Washer Fluid (Inspection Item # 32)			
1) Check windshield washer fluid level.	1		
a) Reservoir is low.	note		
b) Windshield washer does not spray windshield.	note		
Coolant (Inspection Item # 56)			
1) Check coolant (antifreeze) level and condition, and freeze protection.	1		
a) Coolant level in radiator or reservoir is low.	a	a	
b) Coolant shows evidence of excessive oil or dirt contamination, or rust and corrosion.	b	b	
c) Coolant freeze/boil protection is inadequate (acceptable freeze protection - 40°F or lower).	c	c	
d) Coolant pH level is too high or too low.	d	d	
e) Coolant additive package deteriorated.	e	e	
f) Coolant cannot be seen in reservoir or in radiator tank with cap removed.	f		f

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C. ENGINE COMPARTMENT
4. Belts and All Hoses

Revised:

Inspection Responsibility/Result
(School) - (Dept. of Education)
Repair - 30-Day* O.O.S.*

Items to be inspected & condition. **

Belt(s) (Inspection Item # 56)			
1) Visually and physically check all drive belts for proper tension. If available, use a tension gauge . If a gauge is not available, use a ruler to measure the deflection of the belt(s) up and down at the widest point between the drive and driven pulley(s) .	1		
a) Any belt exceeds tension reading recommended by manufacturer, if a tension gauge is used (repair).	a		
b) Using ruler method, any belt is less than 1/2 inch deflection (too tight) when firm pressure is applied . (repair)	b		
c) Any belt tensioner does not pivot or move freely and apply spring pressure on belt. (OOS)	c		c
d) Tension on any belt is too loose (based on specifications of type tension gauge used). (OOS)	d		d
e) Tension of any belt (using ruler method) is too loose when firm pressure is applied (greater than 3/4 inch deflection).	e		
2) Condition/Visually inspect belt(s) for glazing, oil contamination, dry rotting, cuts, and separation of plies. Check belts for twisting or distortion.	2		
a) Any belt is glazed (note).	a	Note	
b) Any belt is oil saturated, dry-rotted, or cut or plies of belt(s) are separated. (OOS)	b		b
c) Any belt is routed around incorrect pulley(s). (OOS)	c		c
d) Any belt is twisted or distorted. (OOS)	d		d
e) Visually inspect belt(s) for rubbing or contact with objects other than pulleys and for routing around correct pulleys.	e		
f) Any belt is making contact with objects other than pulley(s).	f		f
g) Visually inspect belts for proper alignment.	g		

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C. ENGINE COMPARTMENT
4. Belts and All Hoses

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hose(s) (Inspection Item #56)			
1) Visually and physically check that hose connections or clamp(s) are tight.	1		
NOTE: References to hoses include all types of hoses located in the engine compartment, including power steering, coolant, air compressor intake, vacuum, brake hydraulic assist, engine oil, and transmission hoses.			
a) Any hose connection or clamp(s) is loose or is too tight digging into hose	a	a	
b) *Any hose connection or clamp(s) is stripped or damaged.*	b		b
2) Condition	2		
a) Visually inspect all hoses for cuts, abrasions and wear, oil saturation, dry rotting, or "ballooning."	a		
b) Any hose is cut, abraded, worn, oil saturated, dry-rotted, or "ballooned" to the point that failure is imminent.	b		b
3) Routing	3		
a) Visually inspect routing and securement of all hoses.	a		
b) Any hose is misrouted or unsecured so that heat damage, abrasion, or cuts could cause long-term failure.	b	b	
c) Any hose is misrouted or unsecured so that heat damage, abrasion, or cuts could cause imminent failure	c		c

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C. ENGINE COMPARTMENT
5. Accessory Mounting and Condition

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Air Cleaner (Inspection Item # 56)			
1) Check air cleaner assembly (housing, lid, piping, gasket(s), seal, clamp(s)) for securement, condition, and record filter restriction. Check for presence of wing nut and seal (if equipped).	1		
a) Any portion of air cleaner assembly or mounting is loose or damaged, including piping, nuts, bolts or clamps	a	a	
b) There are any worn or damaged seals or gaskets.	b	b	
c) There are any air or vacuum leaks or missing components	c		c
d) Diesel air filter restriction exceeds manufacturer's specifications.	d		d.
Power Steering Pump (Inspection Item # 56)	1		
1) Check securement and condition of power steering pump.	a		a
a) Any portion of the power steering pump, mounting bracketry or fastener is cracked, loose, or missing.			
Air Compressor and Filter	1		
1) Check securement and condition of air compressor and filter assembly.	a	a	
a) Air compressor air filter (if equipped) is dirty	b		b
b) Any portion of the air compressor, compressor air filter (if equipped), filter and compressor mounting bracketry, filter cover, or fastener is cracked, loose, or missing	c		c
d) Hose from engine air cleaner to air compressor is damaged, torn, or missing.			
Water Pump (Inspection Item # 56)			
1) Check condition of water pump and pulley.	1		
a) There is evidence of coolant seepage from water pump, seal, gasket surface, or weep hole.	a	a	
b) Water pump fasteners are loose, damaged, or missing.	b	b	
c) Water pump is noisy, bearing is damaged, or coolant is dripping out.	c		c

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C. ENGINE COMPARTMENT
5. Accessory Mounting and Condition

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Fan (Inspection Item # 56)			
1) Check fan blade and fan clutch assembly for securement and condition.	1		
a) Fan has any cracked, bent, or broken blades.	a		a
b) Any portion of fan mounting is loose.	b		b
c) Fan clutch is seized or loose.	c		c
Alternator (Inspection Item # 7)			
1) Check securement and condition of alternator assembly.	1		
a) Alternator is noisy.	a	a	
b) Any portion of the alternator, mounting bracketry, or fastener is cracked, loose, or missing.	b		b

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C. ENGINE COMPARTMENT
6. Wiring

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	O.O.S.*
Routing and Condition (Inspection Item # 56)			
1) Check routing, securement, and condition of all wiring and any electrical cable in the engine compartment.	1		
a) There is any loose, damaged, or corroded wiring connector or terminal end (repair).	a	a	
b) Any repair has been made using improper gauge wiring (see page 94).	b	b	
c) There is any unsecured or poorly routed wiring that could cause potential short or fire due to abrasion or heat damage.	c	c	
d) There is any burnt wiring or wiring (other than ground wires) missing insulation. (OOS)	d		d

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PROPER WIRING GAUGE USAGE

MAXIMUM LENGTH OF CONDUCTOR IN FEET FROM POWER SOURCE TO LOAD

SAE Wire Size	20	18	16	14	12	10
Circuit Current in AMPS	ft	ft	ft	ft	ft	ft
1	36.4	52.3	78.0			
2	18.2	26.1	39.0	63.0	99.0	
3	12.2	17.4	26.0	42.0	66.0	
4	9.1	13.1	19.5	31.5	49.5	78.8
5	7.3	10.4	15.6	25.2	39.6	63.0
6	6.1	8.7	13.0	21.0	33.0	52.5
7	5.2	7.4	11.1	18.0	28.2	45.0
8		6.5	9.8	15.8	24.8	39.4
9		5.8	8.6	14.0	22.0	35.0
10		5.2	7.8	12.6	19.8	31.5
15			5.2	8.4	13.2	21.0
20				6.3	9.9	15.8
20					6.6	10.5

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C. ENGINE COMPARTMENT
7. Fuel System and Lines

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **

	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Fuel System and Lines (Inspection Item # 56)			
1) Visually check the condition, operation, and securement of all fuel system components, including fuel lines and routing in the engine compartment.	1		
a) There is evidence of dirt, algae, or water in the fuel water separator (if equipped	a	a	
b) There is any unsecured, or poorly routed, or loose fuel line or hose that could cause potential fire due to abrasion or heat damage.	b		b
c) Any fuel system connection is stripped, loose, cracked, or leaking.	c		c
d) Any fuel system component is damaged or not mounted securely.	d		d

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C. ENGINE COMPARTMENT
8. Radiator

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Radiator Mounting (Inspection Item # 56)			
1) Check radiator assembly and mounting for securement and condition.	1		
a) Any portion of radiator or mounting system is cracked, damaged, or has loose or missing fasteners	a	a	
2) Cap	2		
a) Check condition of radiator cap.	a		
WARNING: ALWAYS USE PROPER PROCEDURES WHEN REMOVING RADIATOR CAP.			
b) Radiator cap is hard to open or close.	b	b	
c) Radiator cap leaks down slowly at p.s.i. (pounds per square inch) rating	c	c	
d) Radiator cap is of the wrong pressure rating.	d	d	
e) There is any visible damage to the pressure seat or vacuum relief seat of the cap.	e	e	
f) Radiator cap is missing.	f		f
g) g) Radiator cap fails pressure test.	g		g
3) Reservoir			
a) Check coolant reservoir (including any deaeration or overflow tank) and sight glass (if equipped) for mounting and condition.	3 a		
b) Any portion of coolant reservoir or mounting system is cracked or damaged, is leaking, or has loose or missing fasteners.	b	b	
4) Fan Shroud	4		
a) Check fan shroud for mounting and condition. Any portion of fan shroud or shroud mounting is cracked, damaged, or has loose, or missing fasteners	a	a	
b) Fan shroud is missing	b		b

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Wheel Bearings (Inspection Item # 56)			
1) Inspect front wheel bearings and related components for condition and proper adjustment of bearings. With front wheels raised (wheels unloaded), grasp tire and attempt to rock wheel to check for movement. Spin tire to check for noise and condition of bearings.	1		
a) There is minor seepage of grease around dust cover	a		
b) There is wetness or dripping of grease around dust covers.			b
c) Dust cover or fasteners are missing or loose.			c
d) Any noise, binding, or roughness is discovered in bearings.			d
e) Wheel bearing, end play exceeds manufacturer's specifications (Maximum of .10" in and out play measured at bearing hub).			e
NOTE: It is important to correctly identify the source of any play. To determine if the play is in wheel bearings, have an assistant fully apply brakes while rechecking play. If movement disappears with brakes applied, then play was in wheel bearings.			
I-Beam (Inspection Item # 56)			
1) Inspect I-beam axle assembly.	1		
a) I-beam has been cut, modified, or is damaged.			a
b) There is any bluing or other evidence that I-beam has been heated (Heating of I-beam for king pin replacement does not apply)			b

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
King Pins (Inspection Item # 56)			
1) Inspect king pin assemblies for condition and play as follows:	1		
a) *With front wheels raised, grasp tire at top and bottom or using a pry bar for leverage attempt to move the wheel assembly in and out.*	a		
NOTE: Wheel bearings must be adjusted properly (or wheel bearing play must be eliminated by locking brakes) before checking king pins.			
b) *Place a pry bar under wheel and lift tire straight up and down to determine condition of thrust bearing.*	b		
c) *Locking pin is loose.*			c
d) *End cap O-rings or bolts are loose or missing.*			d
e) *Locking pin is backing out, loose, or missing.*			e
f) *King pin movement is more than 1/4 inch measured at outside edge of tire.*			f
g) *Vertical (up and down) play in king pin assembly is greater than .030", and/or thrust bearing is damaged or missing.*			g
NOTE: If play is beyond specifications, wear may be king pin, axle eye, and/or king pin bushings. Vehicle should be grounded if side play at outside edge of tire is greater than 1/4 inch. Do not tighten king pin lock (if equipped) or grease king pin before inspecting king pin assembly play.			

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Shackles (Inspection Item # 56)			
1) Inspect condition of shackles, spring hangers, and pinch bolts.	1		
a) Any front spring shackle or hanger has significant side wear at spring eye.			a
b) Any front spring shackle or hanger is worn, or pinch bolt is stripped or missing, so that spring pin cannot be clamped tightly.			b
c) Any front spring shackle or hanger is cracked or broken.			c
Spring Mounts (Inspection Item # 56)			
1) Inspect spring mount bracket(s) for condition and securement.	1		
a) Any front spring mount is broken or cracked.			a
b) Any front spring mount-to-frame fastener is loose or missing.			b
c) Frame is cracked at any spring mounting location.			c

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Pins and Bushings (Inspection Item # 56)			
1) Inspect pins and bushings as follows: Inspect front spring pins and bushings for wear and lubrication. Check for wear with front axle loaded. Insert pry bar between spring eye and fixed point at frame and pull down. Measure total free play in pins and bushings .	1		
a) Any spring pin assembly will not accept lubrication, or zerk (grease) fitting is damaged or missing.		a	
b) Total free play (up and down) of pins and bushings exceeds 1/4 inch.			b
c) Inner sleeve or rubber bushing type spring pin assembly(ies) is worn through, or rubber bushing is excessively worn (rubber is compacted or deteriorated, resulting in free play between rubber and spring eye or inner sleeve).			c
A-Frames and Bushings (Inspection Item # 56)			
1) Inspect A-frame and bushings for condition and securement.	1		
a) Rubber bushing(s) is split, badly deteriorated or badly extruded from suspension joints (repair).	a		
b) Rubber bushing(s) is missing. (OOS)			b
c) Any A-frame assembly is bent, missing, broken, or any fasteners or U-bolt(s) are loose or missing. (OOS)			c
d) Any A-frame, bushing, or pivot arm has more than .050" free play at pivot point. (OOS)			d
e) Mounting of bushing assembly(ies) is not secure. (OOS)			e

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	(Dept. of Education) O.O.S.*
Ball Joints (Inspection Item # 56)			
1) Inspect ball joint(s) for condition, securement, and lubrication.	1		
a) Zerk (grease) fitting is missing or damaged, or ball joint will not take lubrication.		a	
b) Any ball joint has more than 3/32 inch axial play.			b
c) Any ball joint nut is loose or missing, or cotter pin is missing.			c
d) Ball joint to A-frame mounting is cracked or loose, or has been welded.			d
U-Bolts (Inspection Item # 56)			
1) Inspect spring U-bolts for condition and securement.	1		
a) Any U-bolt(s) is misaligned.		a	
b) There is rust underneath U-bolt nuts indicating possibility of looseness.			b
c) Any U-bolt, seating plate, shock mount bracket, or nut is loose or missing, cracked, or stripped.			c
Shocks (Inspection Item # 3)			
1) Inspect shocks for condition and securement.	1		
a) There is wetness around shock body due to leaking shock fluid.		a	
b) Any shock mounting or fastener is loose, missing, cracked, or broken.			b
c) Any shock is broken.			c
d) Any shock fails to function.			d

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D. UNDERNEATH BUS
1. Front Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Springs (Inspection Item # 56)			
1) Inspect front springs for condition, securement, and alignment.	1		
a) There are any loose, missing, broken or worn spring clips.		a	
b) Any coil or leaf spring has flattened, and ride height is less than manufacturer's specifications.		b	
c) Either front spring saddle (if equipped) is worn out or missing.		c	
d) Rubber bumper is missing.		d	
e) Any leaf spring(s) is broken, cracked, or missing.			e
f) There is any misalignment of spring leaves or other evidence that center pin is loose or broken.			f
g) Either front coil or leaf spring is worn so that rubber frame bumper is damaged or worn due to frequent bottoming of front suspension.			g
h) Any alignment wedge is loose or damaged.			h
i) On any air bag type spring assembly, air bag is damaged or leaking.			i
j) Spring eye is worn or spread such that bushings are loose in spring eye.			j
k) Any coil spring(s) is broken, insecurely mounted, non-O.E.M. or non-O.E.M. blocks or spacers are installed			k
Wheel Seals (Inspection Item # 56)			
1) Check for condition and leakage.	1		
a) Either front wheel seal is damaged or leaking.			a

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** All Items in these columns may be inspected at the Inspector's discretion

D. UNDERNEATH BUS
2. Front Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Brake Hoses (Inspection Item # 52)			
1) Inspect front brake flexible hoses for condition, securement, and routing.	1		
a) Brake line bracket(s) or securement system is loose or missing.		a	
b) Any front brake flex hose is kinked, collapsed, bulging, has damaged plies or cord, or is damaged below outer covering.			b
c) Any front brake flex hose supporting brackets are damaged or have loose fasteners.			c
d) Any front brake flex hose is rubbing on or routed against other components.			d
e) Any front brake flex hose or connection is leaking fluid or air pressure.			e
Lines (Inspection Item # 52)			
1) Inspect air and hydraulic brakes lines for routing, securement, and condition.	1		
a) Any brake line is bent, crimped, or damaged significantly restricting air pressure or hydraulic fluid.			a
b) Any brake line is rubbing on other components or is abraded.			b
c) Any brake line is not of O.E.M. material, size, or type.			c
d) Any brake line or connection is leaking air pressure or hydraulic fluid.			d
Chambers (Inspection Item # 52)			
1) Inspect front brake chamber assembly(ies) for securement, condition, and proper size.	1		
a) Any chamber mounting bracket is cracked, bent, or broken.			a
b) Any front brake chamber or mounting fastener is damaged or loose.			b
c) Either chamber is not original size, or size of chambers is not matched left and right (both sides same size).			c

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D. UNDERNEATH BUS
2. Front Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Slacks (Inspection Item # 52)			
1) Inspect slack adjusters and S-cam assemblies for wear, condition, operation, and securement.	1		
a) Slack adjuster is mounted so that adjuster bolt is facing chamber.		a	
b) Any portion of slack adjuster or S-cam is missing, broken, cracked, or badly worn.			b
c) S-cam shaft and/or S-cam bushing total wear (up and down) is greater than .040.			c
d) S-cam in and out end play is more than .060.			d
e) S-cam snap ring is missing.			e
f) Slack adjuster has frozen or stripped worm gear or ratchet assembly.			f
Pushrods (Inspection Item # 52)			
1) Inspect pushrod assembly(ies) for condition, securement, and alignment.	1		
a) Pushrod is rubbing against body of chamber, or chamber is misaligned.			a
b) Pushrod on left and right sides are not mounted in identical (same) slack adjuster location hole (same effective slack adjuster length).			b
c) Any portion of pushrod assembly (locknut, pushrod, clevis and pin, or cotter pin) is loose, missing, or damaged.			c
Linings (Inspection Item # 52)			
1) Inspect linings and foundation brake hardware for contamination, wear, damage, and securement.	1		
a) Lining wear is extremely uneven left and right.	a		
b) Front brake lining is less than 1/8 inch thick above metal of shoe (shoe table) at any point (riveted type shoe).			b
c) For bonded type linings, front brake lining is worn to within ¼ inch of shoe table (face of shoe).			c
d) Front brake lining is worn to within 1/8 inch of any rivet or bolt head.			d

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D. UNDERNEATH BUS
2. Front Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
e) Lining is broken, cracked, or loose on shoe.			e
f) Friction surface is contaminated with oil, grease, or brake fluid.			f
g) There is any shimming material between lining and shoe.			g
h) Lining is not proper size.			h
i) Shoe platform or webbing is cracked or damaged.			i
j) There is any loose, damaged, or missing foundation brake hardware within the drum.			j
k) Any foundation brake assembly does not have at least one (1) lining inspection hole.			k
Drums (Inspection Item # 52)			
1) Inspect front brake drum(s) for condition and oversize.	1		
a) There is any crack (other than heat checks) in any drum.			a
b) There is more than .060" wear in drum friction surface (inside diameter is more than .120" over original).			b
c) There is any grease, oil, or brake fluid on inside of drum.			c
d) Drum is not centered on hub (if equipped) causing more than .010" out of round.			d
e) Drum is not mounted securely to hub, or fasteners are loose.			e
Rotors (Inspection Item # 52)			
1) Inspect front brake rotor(s) for mounting, thickness, and condition.	1		
a) Rotor mounting is not secure.			a
b) Rotor has excessive runout (beyond manufacturer's specifications) causing a pulsating in brake pedal.			b
c) Rotor has cracks (other than heat checks) or other mechanical defects.			c
d) Rotor thickness is less than manufacturer's specifications stamped on rotor.			d
e) Any rotor friction surface is significantly grooved or damaged.			e
f) Friction surface is contaminated with oil, grease, or brake fluid.			f

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D. UNDERNEATH BUS
2. Front Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Wheel Cylinders or Calipers (Inspection Item # 52)			
1) Inspect wheel cylinder(s) or caliper(s) for leaks, mounting, and condition.	1		
a) Any wheel cylinder or caliper dust boot is damaged or missing.		a	
b) Any wheel cylinder or caliper is not securely mounted or has loose or missing fasteners.			b
c) There is uneven lining or pad wear, rotor or drum damage, or evidence of dragging, or other evidence that any wheel cylinder or caliper may be sticking.			c
d) Any wheel cylinder or caliper is leaking.			d
Adjust Brakes (Inspection Item # 52)			
1) For hydraulic drum brakes, adjust front brakes at every PM inspection as follows:	1		
a) Brakes must be adjusted until brake drum does not turn.	a		
b) Then back off brake adjustment until there is slight drag on drum surface (.020" clearance between lining and drum).	b		
1) There is any damage or condition which prevents proper adjustment of air or hydraulic drum brakes.			1
2) For S-cam or air disc brakes at every PM inspection, brake chamber pushrod travel must be checked at all four (4) wheel positions, and brakes must be adjusted as necessary to achieve less than or equal to the maximum pushrod travel (after adjustment) shown in Chart 13.	2		
a) There is any damage or condition which prevents proper adjustment of S-cam or air disc type brakes.			a

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D. UNDERNEATH BUS
2. Front Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
3) Automatic Slack Adjusters (ASA) must be checked as follows:	3		
a) Check pushrod travel before any adjustment is made.			
b) Manually adjust the ASA.			
1) Slack adjuster travel is beyond stated limit prior to adjustment.		1	
2) Any automatic slack adjuster arm or mechanism is damaged or loose.			2
3) Adjusted stroke (pushrod travel) of any automatic slack adjuster equipped brake exceeds maximum shown in Chart 13, (repair or replace ASA).			3

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PROCEDURE FOR MEASURING PUSH ROD TRAVEL

Brake chamber push rod travel shall not exceed those specifications relating to maximum stroke at which brakes should be readjusted. Performance of the brake push rod travel inspection should be done with the brake application air pressure in the range of 80 - 90 p.s.i., when measuring total stroke to determine proper brake adjustment.

CAUTION*: Chock wheels before commencing this inspection as vehicle emergency brake(s) must be off*.

Chart 13, Maximum Pushrod Travel

	Type	Maximum Stroke	Maximum stroke with brakes adjusted	Maximum stroke at which Brakes should be adjusted
CLAMP TYPE CHAMBER	6	1-5/8	Should	1-1/4
	9	1-3/4	be as	1-3/8
	12	1-3/4	short as	1-3/8
	16	2-1/4	possible	1-3/4
	20	2-1/4	without	1-3/4
	24	2-1/4	brakes	1-3/4
	30	2-1/2	dragging	2
	36	3		2-1/4
ROTO CHAMBER	9	2	Should	1-5/8
	12	2	be as	1-5/8
	16	2-1/2	short as	2
	20	2-1/2	possible	2
	24	2-1/2	without	2
	30	3	brakes	2-1/2
	36	3-1/2	dragging	2-3/4
	50	4		3-1/4
AIR DISC BRAKES	12	1-3/8	Should be as	1-3/8
	16	1-1/2	short as	1-3/4
	20	1-5/8	possible without	1-3/4
	24	1-3/4	brakes	1-3/4
	30	1-7/8	dragging	2

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D. UNDERNEATH BUS
3. Engine/Transmission Mounts, Starter Mounting

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Engine/Transmission Mounts (Inspection Item # 56)			
1) Inspect engine and transmission mounts for condition and securement.	1		
a) Any mounting fasteners are loose, missing, or broken.			a
b) Any mount is cracked or has deteriorated rubber.			b
Starter Mounting (Inspection Item # 56)			
1) Inspect starter for securement and condition. Check for presence of heat shield (if equipped).	1		
a) Heat shield is loose (if equipped). Heat shield looseness or damage could short positive terminal to ground.		a	
b) Any starter mounting bolt, stud, or nut is loose, damaged, broken, or missing.			b
c) Starter is damaged or loose.			c
d) Heat shield is missing or damaged (if equipped).			d

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D. UNDERNEATH BUS
4. Transmission

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Transmission Bolts (Inspection Item # 56)			
1) Inspect transmission assembly and mounting fasteners for condition and securement.	1		
a) Any transmission assembly fastener(s) is loose, missing, or damaged (repair).		a	
b) Transmission is not mounted securely to flywheel housing.			b
c) *There is any external indication that any torque converter bolt(s)* is loose or missing.			c
Linkage (Inspection Item # 56)			
1) Inspect transmission linkage for routing, condition, and securement.	1		
a) Modulator (TV) cable or vacuum hose is routed where it is subject to excessive heat or			
b) Any linkage hardware or fasteners are loose		b	
c) Modulator (TV) cable is exposed or casing is damaged		c	
d) Modulator vacuum hose is deteriorated or loose		d	
e) Linkage is bent, damaged, or binding, or severely misadjusted.		e	
f) Any linkage hardware or fasteners are missing or linkage is damaged so as to cause a sticking or binding condition.		f	
g) Modulator vacuum hose is leaking or not connected.		g	
Lines (Inspection Item # 56)			
1) Inspect transmission lines for securement, routing, and condition.	1		
a) Any transmission line(s) is unsecured or routed subject to excessive heat or abrasion (note).			
b) Any transmission line is crimped.		b	
c) There is any transmission line of improper type.		c	
d) Any transmission line is worn or deteriorated to the point that failure could occur.		d	

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D. UNDERNEATH BUS
4. Transmission

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Filter (Inspection Item # 56)			
1) Inspect transmission external filter assembly (if equipped) for securement and condition.	1		
a) External filter mounting is insecure or has loose or missing fasteners.	a		
b) Filter canister is damaged.	b		
Cooler (Inspection Item # 56)			
1) Inspect transmission cooler (as equipped) for securement and condition.	1		
a) Mounting of separate transmission cooler (if equipped) is insecure or has loose or missing fasteners	a		
b) Body of transmission cooler, including all hose connections, is cracked or damaged.	b		
Clutch (Inspection Item # 56)			
1) Operation	1		
a) Check pedal, linkage, clutch, and throw-out bearing for wear, slippage, and abnormal noises in the engaged and released positions.	a		
b) Loose nuts and bolts	b		
c) Noisy throw-out bearing (note).	c		
d) Clutch out of adjustment	d		
e Cannot adjust clutch to specs.	e		
f) Excessively noisy throw-out bearing.	f		
g) Clutch slipping, grabbing, or has excessive chatter when engaging clutch.	g		
h) Binding or sticking clutch linkage or return spring.	h		
i) Hard to shift transmission.	i		
j) Visually check clutch pedal pad for wear.	j		
1) Worn pedal cover pad		1	
2) Missing pedal cover pad.			2

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D. UNDERNEATH BUS
4. Transmission

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
2) Check clutch master and slave cylinders for hydraulic leaks and operation (if equipped).	2		
a) Leaking master or slave cylinder or inoperable.			a
3) Adjustment (Inspection Item # 56)	3		
a) Check "free play" travel of the clutch pedal. This is the first easy movement of the clutch pedal and should be no more than 1-1/2 and no less than 3/4 an inch of travel.	a		
b) Free play is out of adjustment (repair).	b		
c) Clutch slips, grabs, or chatters after adjusting "free play" travel. (OOS)	c		
d) No adjustments can be made. (OOS)	d		
Oil (Inspection Item # 56)			
1) Inspect for engine oil leaks at all potential locations and determine severity.	1		
a) Engine oil leakage is causing deterioration of any rubber parts, such as steering linkage boots, hoses, etc.	a		
b) Engine oil is dripping at any location except on exhaust system.	b		
c) There is a drip shield installed to divert oil from the exhaust system.	c		
d) Engine oil is dripping on any portion of exhaust system.	d	d	
Coolant (Inspection Item # 56)			
1) Inspect all potential locations for coolant leaks.	1		
a) There is coolant seepage at radiator, hoses, heater core, engine oil cooler, thermostat housing, head gaskets, freeze plugs, reservoir, water pump, or other potential locations (repair).	a	a	
b) Leakage is excessive and could result in imminent engine failure. (OOS)	b		b

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D. UNDERNEATH BUS
4. Transmission

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Transmission (Inspection Item # 56)			
1) Inspect for transmission fluid leaks at all potential locations and determine severity.	1		
a) Transmission fluid is causing deterioration of any rubber parts, such as steering linkage boots, hoses, etc. (repair).	a		
b) Transmission fluid is seeping at any location except on exhaust system (repair).	b	b	
c) Transmission fluid is dripping on any portion of exhaust system.	c	c	
Power Steering (Inspection Item # 54)			
1) Inspect for power steering fluid leaks at all potential locations and determine severity.	1		
a) Power steering fluid is causing deterioration of any rubber parts, such as steering linkage boots, hoses, etc.	a		
b) Power steering fluid is seeping.	b	b	
c) Power steering fluid is dripping and pooling.	c		c

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D. UNDERNEATH BUS
5. Fuel Tank

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Leaks (Inspection Item # 56)			
1) Inspect fuel tank assembly for leaks.	1		
a) The fuel tank has any cracks.	a		a
b) Any connection(s) are loose at the tank.	b		b
c) There is any fuel leakage from the tank, connections, or cap.	c		c
Mounting (Inspection Item # 56)			
2) Inspect fuel tank mounting system and barrier (if equipped) for securement and condition.	2		
a) Any portion of fuel tank mounting system (including support brackets, retaining straps, and chassis frame) is missing, loose, cracked, or broken.	a		a
b) Any fuel tank mounting fasteners are loose or missing.	b		b
c) *Barrier assembly (if originally equipped) is damaged, insecurely mounted, or missing.*	c		c

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D. UNDERNEATH BUS
5. Fuel Tank

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hoses (Inspection Item # 56)			
1) Inspect all fuel lines, hoses, and under-bus fuel system components, for routing, securement, and condition.	1		
a) Any fuel line or hose is unsecured or is routed subject to excessive heat or abrasion.	a		
b) Any fuel line or hose is deteriorated or damaged (including cracks or any damage which may cause potential leakage) or clamps are loose or missing.	b		
c) Any under-bus fuel system filter, water separator, or other components are insecurely mounted, cracked, or damaged.	c		
Wiring (Inspection Item # 56)			
1) Inspect fuel tank sender unit wiring for securement, routing, and condition.	1		
a) Any wiring or connection has damaged or missing insulation	a		
b) Any portion of sending unit wiring (including ground) or connections is unsecured or is routed subject to excessive heat or abrasion.	b		

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D. UNDERNEATH BUS
6. Brake Equipment

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Brake Lines (Inspection Item # 52)			
1) Inspect all brake hoses, lines, and connections for routing, securement, and condition.	1		
a) Any brake hose or line is unsecured (repair).	a		
b) Any brake line or hose is routed subject to excessive heat or abrasion.	b		
c) Any brake line or hose is deteriorated or damaged to the point that failure could occur (cord frayed, wall thickness thin, rubber contaminated with oil, crimped, etc.).	c		c
d) Any brake line or hose connection is loose.	d		d
e) There is any audible air leak or visible hydraulic brake fluid leakage.	e		e
NOTE: External layer weather cracking only shall not be cause for rejection.			
Brake Valves (Inspection Item # 52)			
1) Inspect all brake system valves for securement and condition.	1		
a) There are any audible air leaks or visible hydraulic fluid leaks from any brake valve. (OOS)	a		a
b) Any brake valve is not mounted securely, is cracked, or damaged. (OOS)	b		b
c) Any reservoir mounting strap or fastener is cracked, loose, or missing. (OOS)	c	c	
Reservoir Mounting (Inspection Item # 52)			
1) Inspect reservoirs (air vacuum tanks) for securement and condition.	1		

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D. UNDERNEATH BUS
6. Brake Equipment

Revised:

Inspection Responsibility/Result

Items to be inspected & condition. **	(School) Repair	(Dept. of Education) 30-Day*	O.O.S.*
Bleed Reservoirs (Inspection Item # 52)			
1) With air system fully charged, check manual operation of safety relief valve.	1		
2) Partially open manual petcock valve on the first (wet) tank. Allow to drain until any moisture (water) or contamination is drained.	2		
a) There is moisture in reservoir (dessicant type air dryer equipped vehicles only).	a		
b) Safety relief valve leaks or does not release pressure.	b		
c) There is excessive sludge or oil contamination in the reservoir (more than eight (8) fluid ounces).	c		
d) Reservoir leaks due to corrosion or is cracked.	d		d

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D. UNDERNEATH BUS
7. Driveline

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Driveshafts (Inspection Item # 56)			
1) Inspect driveshafts for condition.	1		
a) Any driveshaft balancing weight (if originally equipped) is missing	a		
b) There is any foreign matter wrapped around driveshaft	b		
c) Any driveshaft is bent or seriously dented.	c		
d) There are any cracks or other damage in driveshaft which could cause structural failure.	d		
U-Joints (Inspection Item # 56)			
1) Prior to lubrication, inspect U-joints or constant velocity (CV) joints (if equipped) for condition, phasing (alignment of joints), lubrication, and presence of all hardware.	1		
a) U-joints or constant velocity joints are dry of lubrication, or zerk (grease) fitting (if equipped) is missing, clogged, or inaccessible.	a		
b) There is any missing hardware or fasteners in any U-joint or CV joint assembly.	b		b
c) Any U-joint has significant cross-shaft-to-bearing cup play, or CV joint has significant play	c		c
d) Any U-joint or CV joint shows evidence of significant rusting of bearings.	d		d
e) Any bearing cup is loose in yoke.	e		e
Yokes (Inspection Item # 56)			
1) Inspect driveshaft yokes for condition and lubrication.	1		
a) Driveshaft splines are unlubricated	a		
b) Dust cap on yoke is missing	b		
c) Zerk (grease) fitting is missing or clogged	c		
d) Cork washer in dust cap is missing (note).	d		
e) Any yoke has significant play in splines.	e		
f) Any yoke is cracked or damaged.	f		f

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D. UNDERNEATH BUS
7. Driveline

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Hanger Bearings (Inspection Item # 56)			
1) Inspect hanger bearings and rubber insulators for condition and securement.	1		
a) Hanger bearing rubber insulator is deteriorated, damaged, or oil soaked (note).	a		
b) Hanger bearing support is misaligned.	b		
c) Bearing outer race is loose in insulator, or inner race is loose on shaft.	c		
d) There is significant play in hanger bearing.	d		d
e) There is any missing or damaged hardware or fasteners in hanger bearing or support assembly.	e		e
Guards (Inspection Item # 4)			
1) Inspect for presence and condition of driveshaft guards.	1		
a) Any driveshaft guard is bent or damaged	a		
b) Any driveshaft guard is missing, or has loose or damaged mounting fasteners.			b
Driveshaft Park Brake (Inspection Item # 53)			
1) Inspect driveshaft park brake assembly for condition, mounting, securement, and adjustment of linings, drum, linkage, and all other related hardware.	1		
a) Lining is worn down to 2/32 inch from top of rivet head.	a		a
b) Lining is contaminated with grease or oil.	b		b
c) Lining is broken, cracked, or loose.	c		c
d) Drum is cracked or has excessive heat damage or scoring of friction surface.	d		d
e) Any actuating or mounting hardware or fastener is damaged, loose, or missing.	e		e
f) Park brake is not adjusted per manufacturer's specifications.	f		

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D. UNDERNEATH BUS
8. Rear Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Axle Housing (Inspection Item # 56)			
1) Inspect axle housing for condition and leakage.	1		
a) Any portion of axle housing is cracked or bent.	a		
b) Any portion of axle housing is leaking lubricant due to cracks, porous metal, or defective weld.	b		
c) There is any leakage at or around axle housing ends.	c		
d) Lubricant level is low.	d		
e) Differential gaskets or seals are leaking.	e	e	
Vent (Inspection Item # 56)			
1) Inspect condition of axle housing vent.	1		
a) Vent cap is clogged.	a		
b) Vent hose (if originally equipped) is cracked, clogged, or missing.	b		
c) Axle vent is not functional or is missing.	c		
Differential (Inspection Item # 56)			
1 Inspect differential assembly for condition, lubricant level, and leakage.	1		
a) There is no lubricant in the differential.	a		
b) Any external differential hardware or fasteners are loose or missing.	b		
c) Differential pinion yoke has end play or side play exceeding manufacturer's specifications.	c		
d) Pinion/yoke end nut is loose or missing.	d		

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D. UNDERNEATH BUS
8. Rear Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Springs (Inspection Item # 56)			
1) Inspect rear springs for condition, securement, and alignment.	1		
a) There are any loose, missing, broken, or worn spring clips.	a		
b) Any leaf spring or air suspension ride height is less than manufacturer's specifications.	b		
c) Air ride pivot pins and bushings are loose.	c	c	
d) There is any misalignment of spring leaves or other evidence that centering pin is loose or broken.	d		d
e) Any leaf spring is broken or missing.	e		e
f) On any air bag type spring assembly, air bag is damaged or leaking, or air lines and valving are damaged or leaking.	f		f
g) Either rear leaf spring is worn to the point that suspension bottoming has damaged rubber frame bumper.	g		g
h) Rubber frame bumper is missing .	h	h	
U-Bolts (Inspection Item # 56)			
1) Inspect spring U-bolts for condition and securement.	1		
a) Any U-bolt is misaligned.	a	a	
b) There is rust underneath U-bolt nuts indicating possibility of looseness.	b		
c) Any U-bolt seating plate, shock mount bracket, or nut, is loose, missing, cracked, or stripped.	c		
Shocks (Inspection Item # 3)			
1) Inspect rear shocks for condition and securement.	1		
a) There is any wetness around shock body due to leaking shock fluid.	a	a	
b) Any shock is broken.	b		b
c) Any shock fails to function.	c		c
d) Any shock mounting or fastener is loose, missing, cracked, or broken.	d		d

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D. UNDERNEATH BUS
8. Rear Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Shackles (Inspection Item #56)			
1) Inspect rear suspension shackles, spring hangers, and hanger pinch bolts for condition and securement.	1		
a) Any rear spring shackle or hanger is cracked or broken.	a		a
b) Any rear spring shackle or hanger is worn to the point, or pinch bolt is stripped or missing, so that spring pin cannot be clamped tightly.	b		b
Pins and Bushings (Inspection Item # 56)			
1) Inspect rear spring pins and bushings for wear and lubrication.	1		
a) Any greaseable spring pin assembly will not accept lubrication, or zerk (grease) fitting is damaged or missing.	a		
b) Inner sleeve on rubber type spring pin assemblies is worn through, or rubber bushing is excessively worn, (rubber is compacted or deteriorated resulting in free play between rubber and spring eye or inner sleeve).	b		b
c) Rear spring pin bushing (metal type bushing) is worn through.	c		c
d) Total free play (up and down) of pin and bushing exceeds 1/8 inch.	d		
e) On system using two pins and bushings, combined free play exceeds 1/4 inch.	e		
Hangers (Inspection Item # 56)			
1) Inspect hangers for mounting and condition.	1		
a) Any spring hanger or bracket is cracked or broken, or any mounting fastener is loose or missing. (OOS)	a		a

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D. UNDERNEATH BUS
8. Rear Suspension

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Seals (Inspection Item # 56)			
1) Inspect rear wheel seals for condition and leakage.	1		
a) There is wetness or dripping of grease around axle flange.	a	a	
b) Either rear wheel seal is damaged or leaking excessively. (OOS)	b	b	
c) Any axle flange stud or nut is loose or missing. (OOS)	c	c	
Wheel Bearings (Inspection Item # 56)			
1) Inspect rear wheel bearings for condition and proper adjustment of bearings.	1		
a) Raise rear wheels (wheels unloaded) and release park brake.			
b) Grasp tire and attempt to rock wheel assembly to check for movement.			a
a) There is any detectable looseness or roughness in rear wheel bearings.	a		
Hoses (Inspection Item # 52)			
1) Inspect rear brake flexible hoses for condition, securement, and routing.	1		a
a) Any rear brake flex hose is kinked, collapsed, bulging, has damaged plies or cord, or is damaged below outer covering.	a		b
b) Any rear brake flex hose supporting brackets are damaged or have loose fasteners. (OOS)	b		c
c) Any rear brake flex hose is rubbing on or routed against other components. (OOS)	c		d
d) Any rear brake flex hose or connection is leaking fluid or air pressure. (OOS)	d		

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D. UNDERNEATH BUS
9. Rear Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Lines (Inspection Item # 52)			
1) Inspect air and hydraulic brake lines for routing, securement, and condition.	1		
a) Brake line bracket(s) or securement system is loose or missing	a		
b) Any brake line is rubbing on other components or is abraded.	b		
c) Any brake line is not of O.E.M. material, size, or type. (OOS)	c		c
d) Any brake line is bent, crimped, or damaged significantly restricting air pressure or hydraulic fluid. (OOS)	d		d
e) Any brake line or connection is leaking air pressure or hydraulic fluid. (OOS)	e		e
Chambers (Inspection Item # 52)			
1) Inspect rear brake chamber assembly(ies) for securement, condition, and proper size.	1		
a) Any chamber mounting bracket is cracked, bent, or broken.	a		a
b) Any rear brake chamber or mounting fastener is damaged or loose.	b		b
c) Either chamber is not original size or size of chamber is notmatched (both sides same size).	c		c

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D. UNDERNEATH BUS
9. Rear Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) Repair	(Dept. of Education) 30-Day*	O.O.S.*
Slacks (Inspection Item # 52)			
1) Inspect slack adjusters and S-cam assemblies for wear, condition, operation, and securement.	1		
a) Slack adjuster is mounted so that adjuster bolt is facing chamber.	a		
b) Any portion of slack adjuster or S-cam is missing, broken, cracked, or badly worn.	b		b
c) S-cam shaft and/or S-cam bushing total wear (up and down) is greater than .040" .	c		
d) S-cam in and out end play is more than .060"	d		
e) S-cam snap ring is missing.	e		
f) Slack adjuster has frozen or stripped worm gear or ratchet assembly.	f		
Pushrods (Inspection Item # 52)			
1) Inspect pushrod assembly(ies) for condition, securement, and alignment.	1		
a) Any portion of pushrod assembly (locknut, pushrod, clevis and pin, or cotter pin) is loose, missing, or damaged.	a		a
b) Pushrod is rubbing against body of chamber, or chamber is misaligned.	b		b
c) Pushrods on left and right sides are not mounted in identical (same) slack adjuster location holes (same effective slack adjuster length).	c		
d) Any portion of pushrod assembly (locknut, pushrod, clevis and pin, or cotter pin) is loose, missing, or damaged.	d		
e) Pushrod is rubbing against body of chamber, or chamber is misaligned.	e		
f) Pushrods on left and right sides are not mounted in identical (same) slack adjuster location holes (same effective slack adjuster length).	f		

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D. UNDERNEATH BUS
9. Rear Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Linings (Inspection Item # 52)			
1) Inspect linings and foundation brake hardware for contamination, wear, damage, and securement.	1		
a) Lining wear is extremely uneven left and right .	a		
b) Rear brake lining is less than 5/16 inch thick at any point (on brake blocks with original 3/4 inch thickness).	b		
c) Friction surface is contaminated with oil, grease, or brake fluid.	c		c
d) Rear brake lining is less than 1/4 inch thick at any point (on brake blocks with original 3/4 inch thickness).	d		
e) Rear brake lining is worn to within 1/8 inch of any rivet or bolt head.	e		
f) For bonded linings, rear brake lining is worn to within 1/4 inch of shoe table (face of shoe).	f		
g) Any foundation brake assembly does not have at least one (1) lining inspection hole.	g		
h) Lining is broken, cracked, or loose on shoe.	h		
i) There is any shimming material between lining and shoe.	i		
j) platform or webbing is cracked or damaged.	j		
k)) There is any loose, damaged, or missing foundation brake hardware within the drum.	k		
Drums (Inspection Item # 52)			
1) Inspect rear brake drum(s) for condition and oversize.	1		
a) There is any crack (other than heat checks) in drum.	a		a
b) There is more than .060" wear in drum friction surface (inside diameter is more than .120" over original).	b		
c) Drum is not mounted securely to hub, or fasteners are loose.	c		
d) Drum is not centered on hub (if equipped) causing more than .010" out of round.	d		
e) There is any grease, oil, or brake fluid on inside of drum.	e		e

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D. UNDERNEATH BUS
9. Rear Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Rotors (Inspection Item #52)			
1) Inspect rear brake rotor(s) for mounting, thickness, and condition.	1		
a) Rotor mounting is not secure.	a		
b) Rotor has excessive runout (beyond manufacturer' specifications) causing a pulsating in brake pedal.	b		
c) Rotor has cracks (other than heat checks) or other mechanical defects. (OOS)	c		c
d) Rotor thickness is less than manufacturer's specifications stamped on rotor. (OOS)	d		
e) Any rotor friction surface is significantly grooved or damaged.	e		e
f) Friction surface is contaminated with oil, grease, or brake fluid.	f		f
Wheel Cylinders or Calipers (Inspection Item # 52)			
1) Inspect wheel cylinder(s) or caliper(s) for leaks, mounting, and condition.	1		
a) Any wheel cylinder or caliper dust boot is damaged or missing.	a		
b)Any wheel cylinder or caliper is not securely mounted or has loose or missing fasteners.	b		b
c) There is uneven lining or pad wear, rotor or drum damage, or evidence of dragging, or other evidence that any wheel cylinder or caliper may be sticking.	c		
d) Any wheel cylinder or caliper is leaking.	d		d

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D. UNDERNEATH BUS
9. Rear Brakes

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Adjust Brakes (Inspection Item # 52)			
1) For hydraulic drum brakes, adjust rear brakes at every PM inspection as follows:	1		
a) Brakes must be adjusted until brake drum does not turn.	a		
b) Then back off brake adjustment until there is slight drag on drum surface (.020" clearance between lining and drum.	b		
1) There is any damage or condition which prevents proper adjustment of brakes. (OOS)	1		1
2) For S-cam and air disc brakes at every PM inspection, brake chamber pushrod travel must be checked at all four (4) wheel positions. Brakes must be adjusted as necessary to achieve less than or equal to the maximum pushrod travel (after adjustment)	2		
a) There is any damage or condition which prevents proper adjustment of brakes. (OOS)	a		a
3) Automatic Slack Adjusters (ASA) must be checked as follows:	3		
a) Check pushrod travel before any adjustment is made.	a		
b) Manually adjust the ASA.	b		
c) Slack adjuster travel is beyond stated limit prior to adjustment.	c		
d) Automatic slack adjuster arm or mechanism is damaged or loose.	d		
e) Adjusted stroke (pushrod travel) of any automatic slack adjuster equipped brake exceeds maximum shown in Chart 13.	e		e

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D. UNDERNEATH BUS
10. Body Securements and Structure

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) 30-Day*	O.O.S.*
Body Holddowns (Inspection Item # 55)			
1) Inspect for securement and condition of all body holddowns, chassis cowl mounts, and frame pads. Body holddowns include any J-bolt, U-bolt, or clamp type holddown used to secure body to chassis frame.	1		
a) Any body holddown is loose or misaligned, or there are any cracks or stripped fasteners at floor sill securement points.	a	a	
b) Padding between frame rails and floor sills is missing or grossly misaligned.	b	b	
c) Any originally installed body holddown or cowl mount is missing.	c	c	
d) Three (3) or more body holddowns are loose, misaligned, or have missing hardware.	d		d
e) There are three (3) or more body holddowns with cracks or stripped nuts at floor sill securement point.	e		e
Floor (Inspection Item # 55)			
1) Inspect condition of floor structure, sills, and braces.	1		
a) There are any minor cracks in floor sills or braces or in welds	a	a	
b) There is any broken weld or mounting of a floor sill or brace resulting in complete separation more than one (1) foot in length.	b		b
c) There is any broken weld in the mounting of the bracing (K-member) at the front of the body floor (between stepwell and driver's area).	c		c
d) There are any holes or cracks in floor sheet metal creating an opening to the passenger compartment.	d		d
e) Entire cross section of any floor sill or brace is broken.	e		e

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D. UNDERNEATH BUS
10. Body Securements and Structure

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Outriggers (Inspection Item # 55)			
1) Inspect body outriggers and hardware for condition and securement.	1		
a) Any originally installed (as required by manufacturer) outrigger is missing.	a		a
b) Any body outrigger is cracked or has loose or missing hardware.	b		b
Braces (Inspection Item # 55)			
1) Inspect for condition and securement of all chassis and body braces.	1		
a) There is any cracked brace underneath the body .	a	a	
Skirts (Inspection Item # 55)			
1) Inspect body skirts (and luggage compartments, if equipped) for securement and condition.	1		
a) Any body skirt, skirt brace, or luggage compartment has cracked or broken sheet metal or mounting points .	a	a	
b) Luggage compartment door latch, hinge, or lock is sticking, damaged, or malfunctions .	b	b	
c) Any bumper brace is broken, cracked, or missing.	c		c
Frame Rails (Inspection Item # 56)			
1) Inspect condition of chassis frame rails, crossmembers, and all hardware attachment points.	1		
a) There is any crack in either frame rail or any crossmember.	a		a
b) There is any loose or missing rivet or other fastener securing a crossmember to the frame.	b		b

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D. UNDERNEATH BUS
11. Exhaust Systems

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Exhaust Leaks (Inspection item #5)			
1) With engine running and at operating temperature, inspect exhaust system for leaks, condition, and securement.	1		
a) Any exhaust junction gasket or hardware is broken or missing.	a	a	
b) There is any leakage which is audible or can be felt around any portion of the exhaust system including manifold(s), pipe sections, or any junction.	b	b	
c) There is any physical damage to exhaust system (note).	c	c	
2) Mounting	2		
a) Inspect mounting of the exhaust system.	a		
b) There is any exhaust system hanger which is not securely mounted.	b	b	
c) Any exhaust pipe or clamp is loose .	c	c	
d) There is any originally installed exhaust hanger which is missing, broken, or detached from exhaust system or frame mounting point.	d	d	
e) Any clamp is missing.	e	e	
3) Mufflers	3		
a) Inspect condition of the muffler.	a		
b) The muffler is cracked and/or leaking.	b	b	
c) There is other significant physical damage to the muffler .	c	c	
4) Tailpipe	4		
a) Inspect condition of tailpipe and that it extends beyond rear bumper.	a	a	
b) The tailpipe is cracked and/or leaking.	b	b	
c) There is other significant physical damage to the tailpipe	c	c	
d) There is any originally installed exhaust hanger which is missing, broken, or detached from exhaust system or frame mounting point.	d		d
e) Any clamp is missing.	e		e
f) The tailpipe does not extend at least to the rear edge of the rear bumper, but not more than 2 inches beyond bumper.	f		f
g) Left side exhaust tailpipe is to exit no more than 18 inches forward of the front edge of the rear wheel house opening.	g		g

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D. UNDERNEATH BUS
12. Wheels and Tires

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Tread Depth (Inspection Item # 6)			
1) Inspect and measure all tires for tread depth and record on inspection form.	1		
a) Measured tread depth of either front tire is less than 4/32 inch (2/32 inch for rear tires) at three (3) points spaced equally around the circumference of the tire is the same major tread groove. Measurement shall not be taken at a wear bar, and all three (3) points shall be less then 4/32 inch before tire is rejected. Measurement shall be taken at the most worn groove of the tire.	a		a
b) There is evidence that any recapped tire has been regrooved.	b		b
c) Any front tire is recapped or regrooved type tire.	c		c
d) There is evidence that any tire has been regrooved using a procedure not approved by tire manufacturer or dealer.	d		d
Pressure (Inspection Item # 56)			
1) With tire cold, check pressure of all tires and record on inspection form.	1		
(NOTE: Refer to Tire and Rim Association Manual for correct air pressure for your specific tire and load rating.)			
a) Pressure in any tire is less than the maximum cold inflation pressure stated on sidewall of the tire, minus 20%.	a		a
b) Pressure in any tire is greater than 5% above maximum cold inflation pressure stated on sidewall of the tire.	b		b
c) There is greater than 20% difference in pressure between any tires on a particular axle.	c		c

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D. UNDERNEATH BUS
12. Wheels and Tires

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Damage (Inspection Item # 56)			
1) Inspect for damage to wheels and tires.	1		
a) There is foreign material in the tire tread which could cause damage or loss of air pressure.	a		a
b) There is any evidence of separation, bulges (other than normal manufacturer bulge), or other damage within the carcass of the tire.	b		b
c) c)There are any cuts, abrasion, or other damage to tire sidewall resulting in exposed or damaged cord.	c		c
d) There are any cracks which run around the bead or sidewall of the tire.	d		d
e) On retreaded tire there is any separation of the tire tread from the tire carcass which could result in tire or tread failure.	e		e
f) Any valve cap is missing.	f	f	
g) Any valve stem is damaged or mislocated so that tire cannot be filled with air.	g		g
NOTE: Weather cracking only shall not be cause for rejection.			
NOTE: Refer to Tire and Rim Association Manual for correct procedures in demounting and mounting of tires and rims.			
h) There are minor dents or bends in a rim.	h	h	
i) There is any damage to the lock ring assembly or lock ring groove of a multi-piece rim, including rust or corrosion which could cause the lock ring not to seal fully.	i		i
j) There are any cracks or breaks at the lug holes or any other part of a rim or cast spokes.	j		j
k) There are any dents or bends in a rim which could result in failure of the rim or separation of the tire from the rim.	k		k

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D. UNDERNEATH BUS
12. Wheels and Tires

Revised:

Items to be inspected & condition. **	Inspection Responsibility/Result (School) - Repair	(Dept. of Education) - 30-Day*	O.O.S.*
Matching (Inspection Item # 56)			
1) Inspect for matching of tire construction, design, size, and load rating on each axle.	1		
a) There is mismatching of inner and outer dual tire diameter greater than 3/8 inch.	a		a
b) There is any tire marked for other than highway use.	b		b
c) Any tire is not of proper type, size, and minimum load rating.	c		c
d) All tires on an axle are not of same type (e.g., lug or rib) and size.	d		d
e) Any tire is below minimum load rating.	e		e
f) Radial and bias ply tires are intermixed on the same axle.	f		f
Alignment (Inspection Item # 56)			
1) Inspect tires for evidence of proper alignment.	1		
a) Any tire is feather-edged, cupped, or has uneven tread wear.	a	a	
b) Lateral runout of any tire/rim assembly exceeds 1/4 inch .	b	b	
c) Tires/wheels are grossly misaligned, affecting steering control.	c		c
Wheel Hardware (Inspection Item # 56)			
1) Inspect for presence, type, condition, and securement of all wheel hardware.	1		
a) Check for proper spacing of rear dual wheels and tires (proper spacer width).	a		a
b) There is improper matching of rims and lock rings.	b		b
c) There is evidence of slippage of wheel assembly on cast spoke hub.	c		c
d) Stud holes are elongated.	d		d
e) Any wheel nut, stud, or clamp is loose, or there is rust or corrosion indicating possible looseness.	e		e
f) Any wheel, nut, stud, or clamp is broken or missing.	f		f
g) Any improper spacer is installed between dual wheels.	g		g

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