

AIR SUPPLY SYSTEM INSPECTION

2017 update

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1. AIR LEAK CHECK

2. LOW AIR WARNING CHECK

1. AIR LEAK CHECK
2. LOW AIR WARNING CHECK
3. PARKING BRAKE CHECK
4. SAFETY START ENGINE
5. AIR GOVERNOR CUT OUT CHECK

Let the air gauge stabilize; depress brake pedal and hold, release parking brake. Tell tester, "Hold for 1 minute, Air loss cannot exceed 3 PSI". Tell tester what PSI is after the 1 minute and report no air loss.

Slowly pump air pressure down to check low air pressure warning devices. Tell tester, "Buzzer and warning light must activate at 60 or above PSI". Tell tester what PSI was when warnings occurred.

3. PARKING BRAKE CHECK

4. SAFETY START ENGINE

Air Gauge (1)

5. AIR GOVERNOR CUT OUT CHECK

Continue pumping down air pressure until parking brake pops on; Tell tester, At approximately 40 psi Tell tester what PSI was when parking brake activated.

1

Tell tester, "I'm doing a safety start" demonstrate by making sure transmission is in neutral and pulling on the parking brake. While foot is on brake pedal, start the bus. Tell tester, "ABS light came on and went off". With the engine running, build air pressure to maximum by letting engine idle at 1200-1500 RPM's.

With engine running, build air pressure to maximum. Tell tester, "air governor should cut out at 120-140 PSI". Tell tester what PSI was when air governor cuts out.

BRAKE CHECKS

PARKING BRAKE CHECK

SERVICE BRAKE CHECK

PARKING BRAKE CHECK
SERVICE BRAKE CHECK

Tell tester I'm checking parking brake, place bus in Drive and gently apply accelerator, bus should not move. Tell tester "it holds".

Service Brake Check

Brake-off, bus in gear. Pull forward slowly (up to 5 mph) , apply the service brake and stop. Check to see that the vehicle does not pull to either side and that it stops when brake is applied.

Tell tester service brake is "working properly".
(turn tire left for ease of visual inspection of brakes and suspension parts)

Ammeter/Voltmeter

INTERIOR INSPECTION

PASSENGER ENTRY: Entry door

Shows charging, system is working properly, warning light is off.

PASSENGER ENTRY
EMERGENCY EQUIPMENT
SEATING
EMERGENCY EXIT

Demo by hand, opens smoothly, closes securely from the inside/outside, hinges secure, seals intact, no damage to glass.

DOOR WINDOWS ARE CLEAN

STUDENT MIRROR

: Water Temperature

Oil Pressure

Air Pressure

: Tachometer

Student Mirrors (1)

In addition to checking the external mirrors, school bus drivers must also check the internal and external mirrors used for observing students: Check for proper adjustment.

Check that all internal and external mirrors and mirror brackets are not damaged and are mounted securely **ARE CLEAN**

- Working properly. Climbing to normal operating range. Warning light is off.

Air Gauge

- Make sure the air gauge is working properly.
- Build air pressure to governor cut-out, roughly 120-140 psi or as specified by the manufacturer.

Tells the number of revolutions the engine is turning per minute.

WINDSHIELD

SEATBELT

SERVICE DOOR LIGHT

.. Is clean, no damage to glass,
Has no obstructions

- Securely fastened, adjusted properly. Not ripped,
frayed, assembly securely mounted.

- working properly,

PASSENGER ENTRY: Handrail

PASSENGER ENTRY: Steps

- Is secure.

- Are clear, tread is not excessively worn,
loose.

EMERGENCY EQUIPMENT

SEATING: Seat frames

SEATING: Seat cushions

- **First aid kit:** Identify.
- **Body fluid kit:** Identify.
- **Reflective triangles:** 3 each, Identify.
- **Fire extinguisher:** Properly charged and **Secured**
- **Spare fuses:** 6 fuses in driver compartment *or* bus has circuit breaker and does not require fuses.

- Securely mounted to the floor. Not broken,

- Securely mounted to the frame.

EMERGENCY EXIT: Side exits

Back exit

EMERGENCY EXIT: Rear & front roof exits

- Lift red handle, opens smoothly and locks in open position, no damage and closes securely from inside.

- Red handle, opens smoothly no damage and closes securely from inside.

EMERGENCY EXIT: Service door

EXTERIOR INSPECTION

RIGHT/LEFT SIDE MIRRORS

- Demo air release switch, push open.

SERVICE DOOR
RIGHT/LEFT SIDE MIRRORS
FRONT LIGHTS & LENSES
REFLECTIVE TAPE & LENSES
WINDSHIELD
WIPERS
CROSSING ARM

- **Brackets:** Not damaged, securely
mounted, properly adjusted, no damage to brackets
or loose fittings.
- **Glass:** Clean,

FRONT LIGHTS & LENSES

REFLECTIVE TAPE

REFLECTIVE LENSES

WIPERS

WIPERS

CROSSING ARM

STEERING

- Arms/Blades: Securely mounted, not damaged. Operates smoothly

Crossing Arm

Check that the safety arm is securely mounted and functions properly in conjunction with stop paddle

1. STEERING BOX
2. POWER STEERING HOSES
3. STERRING LINKAGE

1. STEERING BOX (FLUID ACCESS door)

2. POWER STEERING HOSES (FLUID ACCESS door)

3. STERRING LINKAGE (FLUID ACCESS door)

Steering Box

- Check that the steering box is securely mounted and not leaking. Look for any missing nuts, bolts

- Check for power steering fluid leaks or damage to power steering hoses.

Steering Linkage

- See that connecting links, arms, and rods from the steering box to the wheel are not worn or cracked.
- Check that joints and sockets are not worn or loose and that there are no missing nuts, bolts, or cotter keys/pins.

STOP PADDLE

FRONT SUSPENSION

1. SPRING HANGERS

Stop Paddle/Safety arm (1)

- Check the stop arm/paddle to see that it is mounted securely to the frame of the vehicle.
- Also, check for loose fittings and damage.
- Check that the stop arm/paddle extends fully when operated and lights are operational.

1. SPRING HANGERS
2. SHOCK ABSORBERS
3. SPRINGS
4. U BOLTS

Mounts:

Spring hangers: Not cracked, broken.

Bushings: Not missing, damaged.

2. SHOCK ABSORBERS

3. SPRINGS

4. U BOLTS

FRONT BRAKES

1. BRAKE HOSES & LINES

2. HOSE COUPLINGS OR FITTINGS

1. BRAKE HOSES & LINES
2. HOSE COUPLINGS OR FITTINGS
3. BRAKE CHAMBER
4. SLACK ADJUSTERS & PUSH RODS
5. BRAKE DRUM & ROTORS
6. BRAKE LININGS

Brake Hoses/Lines

- Look for cracked, worn, frayed, or leaking hoses, lines, and couplings.
(if hydraulic, check for leaks, if air, listen for leaks)

- All connections, couplings and fittings need to be secure and not leaking
- Check that hoses or lines can supply air/hydraulic fluid.

3. BRAKE CHAMBER

4. SLACK ADJUSTERS & PUSH RODS

5. BRAKE DRUM & ROTORS

- No cracks, dents, leaking, no loose, missing clamps, securely mounted, no oil, grease on brake

- Check brake adjustment and slack adjuster push rod, should not move more than one inch when pulled by hand or with brakes released. No loose, broken, missing parts. Not bent.

Securely mounted slack adjuster and pushrod

Brake Drum

- Check for cracks, dents, or holes. Also check for loose or missing bolts.
- Check for contaminants such as debris or oil/grease.

6. BRAKE LININGS

FRONT AXLE

1. TIRES

Brake Linings

- Brake linings should not be worn dangerously thin.
- Check the brake linings for contaminants, such as grease, oil, etc.

1. TIRES
2. TREAD
3. RIMS
4. LUG NUTS
5. HUB OIL SEAL/AXLE SEAL

- **Tires (5) : Tread depth:** Check for minimum tread depth (4/32 on steering axle tires, 2/32 on all other tires).
- Tire condition:** Check that tread is evenly worn and look for cuts or other damage to tread or **sidewalls**. Also, make sure that **valve caps and stems** are not missing, broken, or damaged.
- Tire inflation:** Check for proper inflation by using a tire gauge.
- Note:** You will not get credit if you simply kick the tires to check for proper inflation.

Front
2. TREAD

3. RIMS

4. LUG NUTS

- Tread depth 4/32

- **Rims** Check for damaged or bent rims.
Rims cannot have welding repairs.

- **Lug Nuts**
Check that all lug nuts are present,
free of cracks and distortions, and show no signs
of looseness such as rust trails
Make sure all bolt holes are not cracked or distorted.

5. HUB OIL SEAL/AXLE SEAL

REAR
6. MUD FLAPS

LEFT SIDE EXTERIOR

7 Check oil level through site glass (if removable), not leaking oil/grease.

Splash Guards/Mud Flaps (1)

(Must be checked at the rear axle)

If equipped, check that splash guards or mud flaps are not damaged and are mounted securely.

SIDE LIGHTS & LENSES (BETWEEN AXLES)

BAGGAGE DOOR

SIDE EMERGENCY EXIT

REFLECTIVE TAPE & LENSES

SIDE LIGHTS & LENSES (BETWEEN AXLES)

BAGGAGE DOOR

SIDE EMERGENCY EXIT

Check all light lenses on the side of vehicle the same way as the front. They are not broken or missing. They are clean and working properly, and are the correct color for their function/location.

Identify each light by pointing to each, confirming correct color for its function/location, and saying what color each light is.

Marker/clearance lights Amber

Turn signal Amber

Reflective Tape & Lenses

Reflective tape: securely affixed to bus

Reflector lenses: Not ~~damaged~~ or missing Amber
Clean

Baggage Compartments (1) Check that baggage and all other exterior compartment doors are not damaged, operate properly, and latch securely.

Note: Driver must open at least one

Recommend open the fuse box door or first door you come to and refer to method 2. "I would inspect them all this same way"

Opens smoothly and locks in open position, no damage and closes securely from outside.

(inspected the same as the front)

REAR AXLE

TREAD
HUB OIL SEAL
DISC RIMS

(inspected the same as the front)

REAR SUSPENSION

AIR RIDE COMPONENTS (*full air ride suspension*)

(inspected the same as the

REAR BRAKES

Tread depth $2/32$ in major grooves and treads with evenly.

TIRES RIMS/LUG NUTS,
INSPECT SAME AS FRONT

Hub is sealed and not leaking.

Spacers or Budd Spacing (1)

If equipped, check that spacers are not bent, damaged, or rusted through.

Check disc (Budd) wheels for even spacing, damage, and foreign objects.

- If vehicle is equipped with torsion bars, torque arms, or other types of suspension components, check that they are not damaged and are mounted securely.
- Air ride suspension should be checked for damage and leaks.

SPRING HANGERS/SPRINGS/SHOCK ABSORBER/UBOLTS
INSPECT SAME AS FRONT

BRAKE CHAMBER
SLACK ADJUSTER/PUSH ROD

BRAKE DRUM
BRAKE LININGS

HOSE/HOSE COUPLINGS
INSPECT ALL THE SAME AS THE FRONT

DRIVE SHAFT/ EXHAUST/ FRAME

(Back left side engine door)

DRIVE SHAFT

EXHAUST

DRIVE SHAFT
EXHAUST
FRAME
COOLANT LEVEL

Drive Shaft

- See that drive shaft is not bent, cracked or twisted
- Couplings or u-joints should be secure and free of foreign objects.

Exhaust System

- Check system for damage and signs of leaks such as rust or carbon soot.
- System should be connected tightly and mounted securely and there are no loose clamps.
- The exhaust system should have no cracks, holes, or severe dents.

FRAME

COOLANT LEVEL

ENGINE COMPARTMENT

Frame

- Check for cracks, bends, broken welds, holes or other damage in the longitudinal frame.
- Look for loose, cracked, bent, broken, or missing cross members.
- Look for signs of breaks or holes in the box or floor.

Coolant Level

- Inspect reservoir sight glass, or
- If engine is not hot, remove radiator cap and check for visible coolant level. If engine is hot then describe what they would look for once cap is removed.

BELTS
ALTERNATOR
WATERPUMP
POWER STEERING UNIT
AIR COMPRESSOR

ENGINE OIL
TRANSMISSION OIL
HOSES
HOSE CLAMPS
LEAKS UNDER BUS

BELTS

ALTERNATOR

WATERPUMP

Engine Compartment Belts

Demo Deflection

(1/2 to 3/4 inch play at center of belt) :

Check for: No cracks, frays.
no signs of wear.

- Power steering belt.
- Water pump belt.
- Alternator belt.
- Air compressor belt.

Identify alternator

- Secure, all wires securely fastened.
- Belt driven Demo for Deflection
(1/2 to 3/4 Inch play at center of belt) :

Check for: No cracks, frays.
no signs of wear.

GEAR OR BELT

**BELT CRITERIA OR GEAR
IS NOT LEAKING, NOT DAMAGED
mounted Securely, operating Properly**

Identify the water pump

- Mounted properly and not loose.
- Belt driven Demo Deflection
(1/2 to 3/4 inch play at center of belt) :

Check for: No cracks, frays.
no signs of wear.

GEAR OR BELT

**BELT CRITERIA OR GEAR
IS NOT LEAKING, NOT DAMAGED
mounted Securely
operating Properly**

POWER STEERING UNIT

**POWER STEERING
DIPSTICK**

AIR COMPRESSOR

ENGINE OIL

Power Steering Fluid

- Indicate where power steering fluid dipstick is located.
- Check for adequate power steering fluid level. Level must be above refill mark.
- Belt driven Demo for Deflection (1/2 to 3/4 inch play at center of belt) :

frays. Check for: No cracks, no signs of wear.

**Gear or Belt Criteria. Mounted Securely
Not Leaking Not Damaged. Operating properly**

Air Compressor:

- ID location, securely mounted, no air or fluid leaks,
- Belt driven Demo for Deflection (1/2 to 3/4 inch play at center of belt) :

frays. Check for: No cracks, no signs of wear.

**BELT CRITERIA OR GEAR
IS NOT LEAKING. NOT DAMAGED
Mounted Securely Operating properly**

- Safe operating range above the add mark.

HOSES

HOSE CLAMPS

-
- Inspect hoses for condition and leaks.

NO Damage

- No leaks, clamps fit and tight.

LEAKS UNDER BUS

REAR LIGHTS & LENSES

REFLECTIVE TAPE & LENSES REAR

Leaks/

- Look for puddles on the ground.
- Look for dripping fluids on underside of engine and transmission.

Lights/Reflectors/Reflector Tape Condition (Front, Sides & Rear)

Check that all external lights and reflective equipment are clean and functional. Not broken, or missing and proper color for their function.

Light and reflector checks include:

- Clearance lights (red on rear, amber elsewhere).
- Red Brake lights/Red tail lights
- Left turn signal. Right turn signal. Amber.
- Four-way emergency flashers. Amber.
- Strobe light, if equipped.
- Stop arm/paddle light. Red
- Alternately flashing amber lights./Alternately flashing red lights.
- Red reflectors (on rear) and amber reflectors (elsewhere).
- Reflector tape condition

Reflective tape: Clean and securely affixed to bus

Reflector lenses: Not broken or missing Red

FUEL TANK

(Open fuel door)

Fuel Tank (1)

Check that tank(s) are secure, cap(s) are tight,
and that there are no leaks from tank(s) and caps.