

Pre Trip Inspection of the School Bus

Reference Guide and Test

Introduction

This video is designed to demonstrate for school bus drivers the importance of performing the Pre Trip Inspection, before each trip. Throughout the video, we will remind drivers about the importance of thoroughness when performing the pre trip inspection.

This comprehensive video will cover most of the procedures that school bus drivers must follow in preparing their bus at the beginning of each school day. However, please keep in mind, **that whatever the policies of your school district are, you should always follow those policies.** The material in this video is meant to supplement, not to replace hands on training.

This reference guide will follow a normal procedure for the pre trip inspection. Keep in mind that each school district will have their own pattern of performing the pre trip inspection. Be sure to follow the guidelines set down by your district.

A state certified driver instructor, Michelle Fisher, will demonstrate the pre trip to a new school bus driver.

Examining the outside of the bus

1. Look for any visual damage - cracks in the windshield, dents on the side of the bus or any type of visual damage.
2. Do a complete walk around of the bus

Check on safety items inside the bus

1. Make sure the bus is properly certified
2. Note the date when the bus was last inspected and when next inspection is due
3. Check the 1st aid kit and make sure it's properly stocked
4. Check reflectors, they must be in good working condition
5. Check fire extinguisher: make sure it's certified and check pin to make sure its okay
6. Follow your district's policies for any additional interior items to be checked

Checking the Engine Compartment (1)

Many school transportation departments do the maintenance checks on each school bus. However, drivers should have a basic knowledge of where most of the components are located. Check with your supervisor for further information. **

Checking gauges and components inside the bus

1. Begin the procedure by starting the bus
2. Start on the left side of the compartment and work clockwise
3. List of gauges to activate and check: strobe light, defroster, fans, driver compartment lights, passenger lights in front, passenger lights in the rear, amp gauge, transmission fuel gauge, air compressor gauges; front and rear, fuel gauge, MPH gauge, RPM gauge, oil, water and volt gauge.

4. Additional gauges and components: headlights, high beams and make sure indicator is working, brake pedal, accelerator pedal, gear shift lever; shift gears to make sure they are working.
5. Additional items: Check indicators on red light crossovers, toggle switches for foot warmers and report any switches or component parts that aren't working to your supervisor or bus mechanic.
6. Any switch that doesn't light up may indicate a malfunction. Report it ASAP.
7. Check out controls on driver's seat to see it's working properly. An out of adjustment drivers seat, may prevent the driver from being able to see clearly into the mirrors.
8. Make sure the seat belt is working, check steering wheel to make sure there isn't too much play in the wheel, and do a horn check.
9. There is a wide variation of the layout of switches and gauges on school buses. Before operating a new bus go over the configuration with your instructor. Not being aware of where switches and gauges are located can lead to accidents when a quick response to a situation is needed.

Inspecting the exterior of the bus

In this section the instructor will demonstrate that the bus must pass every test before it will be allowed to transport students. Also, the driver must report any item that isn't working properly. It's not enough to notice that there is a malfunction. The driver must proactively take action.

A. Driver's Side of the Bus

1. Start with your clearance lights and your red light crossovers. Make sure they are properly functioning.
2. Check windows all around the bus to make sure there is no glass broken.
3. Check the unit number, it should be visible; check high beams and make sure they are working; and check the parking lights, front bumper and license plate.
4. Check the wiper blades and the washer fluid.
5. Check the mirror brackets and make sure they are in tact
6. Inspect the overhead exterior lights and the 4 way hazards.
7. Check the tread depth of the front tires; there should be a depth of at least 4/32nds.
8. Thoroughly check the front tires: make sure there are no abrasion or cracks, check the valve stems and inspect the lug nuts to make sure they aren't loose.
9. Use the baton to check the tires for proper air pressure.
10. On the driver's side of the bus the instructor makes sure the stop sign is visible, she checks on clearance lights, the emergency exit lettering and the state I.D.#.
11. Instructor checks the emergency door exit. She makes sure it's working and she listens for the sound of the buzzer. She also checks the 4 way hazards.
12. Check the rear tires: tread depth should be no less than 2/32nds, place baton between the 2 dual tires to see if there is any obstruction and check outside of tires for cracks, abrasions, or bulges.
13. Check axle and lug nuts to make sure they are properly tightened.
14. Check valve stems on both the inside and outside dual tires.

B. The Rear of the Bus

Instructor checks the following items:

1. Clearance Lights
2. Red Light Crossover
3. Emergency Exit
4. 4 Way Hazards
5. Tail Lights
6. Stop When Red Lights Flash
7. Reflectors
8. License Plate Light and the Bumper

C. Passenger Side of the Bus

The instructor will inspect the passenger's side of the bus repeating the same thorough check list that she performed on the drivers side of the bus. This will include: Front and rear tires, the various light configurations, mirror brackets and windows. Gas cap is located on Passenger's side, so instructor will inspect it.

Checking Items on the Interior of the Bus

1. Seats: checks condition of seats and clean up any debris left on seats.
2. Emergency exit: open exit door and check that warning device (buzzer) is working.
3. Windows: Avoid back injury by positioning yourself on seat directly in front of window when opening or closing window. Don't reach over, this could result in back injury.
4. Turn Signals: check on dashboard to make sure indicators are working.
5. Headlights: Turn on headlights and switch between high and low beams. Check to make sure both of them are working.

It's now necessary for the instructor to go outside of the bus to make sure the lights and indicators are working. (In order to check the service brake, the driver needs to wedge a stick underneath the brake pedal. This will engage the rear brake lights.)

Outside of the bus

1. Check that the turn signals are working.
2. Check the turn signals on the sides of the bus
3. Check the back up lights at the rear of the bus this includes: brake lights, turn signals, back up lights and back up warning buzzer.

Pre Trip Air Brake Check

Static Air Brake Check

1. Test begins with chocking tires of bus. This is necessary so bus won't roll forward during the test.

2. First part of test will demonstrate when air governor should cut in and when air governor should cut out.
3. Driver starts the bus and waits for the air pressure to build up.
4. The air pressure should cut in at no less than 85 PSI and cut out at no more than 130 PSI.
5. The driver releases the brake and waits for the pressure to build up to 85 PSI.
6. Once the needle reaches approximately 85 PSI the driver waits for the air governor to cut out at approximately 130 PSI.
7. The driver now sets the brake.
8. This test demonstrates that the cut in and cut out pressure is working properly.

Static Pressure Test

1. The reason for this test is to make sure that the pressure remains stable.
2. Start the test by shutting off the engine, leave the key in the on position.
3. Monitor the air gauges for the next minute and make sure there isn't a decrease in more than 2 PSI. This demonstrates the air pressure is stable.

Applied Brake Test

1. In this test we will test air pressure while applying pressure to the brake pedal.
2. Release the spring brake before starting the test.
3. Next apply pressure to the brake pedal.
4. She holds down the brake pedal for a minute and makes sure the air pressure doesn't decrease by more than 3 PSI.

Low Pressure Warning System

1. The low pressure warning system alerts drivers that they have low pressure.
2. Test this system by pumping the service brake with the engine running.
3. When the low pressure light comes on and you can hear the buzzer, this means the low pressure system is working.
4. This usually occurs when the air pressure drops below 70 PSI.

Spring Brake Test

1. The spring brake test begins with the driver applying and releasing the service brake.
2. When the air pressure drops off far enough, the spring brake automatically pops out.
3. The driver then starts the engine and builds up the air pressure to approximately 100 PSI.
4. The driver then moves the bus forward a few feet and then she applies the spring brake.
5. The spring brake will then engage and stop the bus.
6. The test is successful.

One final test is for the driver to drive the bus in the bus yard. The driver should test the service brake several times to make sure the brakes are working properly. This completes the pre trip inspection of the school bus.

One final reminder. School buses come in a wide variety of configurations. Make sure that your pre trip inspection meets the criteria set down by your school district to meet this criteria. And, remember to always follow the guidelines set down by your school district.

Test Questions

1. When checking gauges you should move from left to right in the drivers compartment

True ____ **False** ____

2.. Tread depth of the rear tires should be at least 4/32nds

True ____ **False** ____

3. In order to check the service brake, the driver needs to wedge a stick underneath the brake pedal

True ____ **False** ____

4. The spring brake test begins with the driver applying and releasing the service brake.

True ____ **False** ____

5. Test low pressure system by pumping the service brake with the engine shut off.

True ____ **False** ____

6. With the static air pressure test, the air pressure should cut in at no less than 85 PSI and cut out at no more than 150 PSI.

True ____ **False** ____

7. The driver must report any item that isn't working properly at their earliest convenience.

True ____ **False** ____

8. Static Pressure Test: The reason for this test is to make sure that the pressure remains stable

True ____ **False** ____

9. Whatever the policies of your school district are, you should always follow those policies.

True ____ **False** ____

10. Checking Items on the Interior of the bus is not as important as checking the exterior of the bus.

True ____ **False** ____

Answer Key

1. True

2. False

3. True

4. True

5. False

6. False

7. False

8. True

9. True

10. False