**Pre-Trip Vehicle Inspection: Brake System**

**Virtual Reality Training**

**Practice/Evaluation Answer Key**

***Introduction***

1. Teleport to the wheel chocks. Grab the wheel chock with your virtual hand. Place the chock in front of or behind the tractor’s drive wheels in one of the marked zones. Release the trigger once the chock is in the marked zone.
2. If both wheel chocks are on the ground near the tractor's drive wheels, place one chock in front of a drive wheel and the other one behind a drive wheel.
3. If only one chock is placed, place another chock on the other side of the tractor’s drive wheels.
4. If both chocks are in front of the tractor's drive wheels, grab one of the chocks and place it behind the tractor’s drive wheels.
5. If both chocks are behind the tractor's drive wheels, grab one of the chocks and place it in front of the tractor’s drive wheels.
6. Teleport to the cab door. Activate the door handle by grabbing the handle with your virtual hand and pulling toward you to enter the cab.

***Part 1 - Air Brake Test***

1. Hover your virtual hand over the red trailer supply button to check its position.
2. If the trailer supply button is OUT:
3. Hover your hand over the button for about 1 sec, or
4. Grab and release the button with your virtual hand.
5. If the trailer supply button is IN:
6. Grab the button with your virtual hand and pull it, and
7. Release the trigger once the button’s state is “OUT”.
8. Hover your hand over the yellow parking brake button to check its position.
9. If the parking brake button is OUT:
10. Hover your hand over the button for about 1 sec, or
11. Grab and release the button with your virtual hand.
12. If the parking brake button is IN:
13. Grab the button with your virtual hand and pull it, and
14. Release the trigger once the button’s state is “OUT”.
15. Grab the key switch with your virtual hand. Turn your hand an eighth turn to the right. Release the trigger once the key is turned to the ON position.
16. Activate the service brake pedal with your laser pointer.
17. Select the button for the next correct action for the service brakes with your laser pointer.
18. Correct answer: “Press”.
19. Grab the red trailer supply button with your virtual hand. Push your hand toward the dashboard, and release the trigger once the button is IN.
20. Grab the yellow parking brake button with your virtual hand. Push your hand toward the dashboard, and release the trigger once the button is IN.
21. Look at the air gauges on the dashboard and listen for leaks. Then activate the question icon with your laser pointer.
22. Answer Question 1: Do the air brakes have a leak and is it serious?
23. If the air gauge does not drop and there is no leak sound, the correct answer is “No.”
24. If the air gauge drops less than 4 psi and there is a leak sound, the correct answer is "Yes, but the leak is not serious. Report the defect."
25. If the air gauge drops 4 psi or more and there is a leak sound, the correct answer is "Yes, and the leak is serious. Have the vehicle repaired immediately."
26. Activate the service brake pedal with your laser pointer.
27. Select the button for the next correct action for the service brakes with your laser pointer.
28. Correct answer: “Pump”.
29. Look at the air gauges on the dashboard. Check for the low air alarm sound or display on the dash once the air pressure falls between 60 and 80 psi. Then activate the question icon with your laser pointer.
30. Answer Question 1: Did you see or hear the low-air alarm?
31. If the Low-air alarm sounded and displayed, the correct answer is "Yes.”
32. If the Low-air alarm didn’t sound or display, the correct answer is “No. Report the defect and have vehicle repaired immediately.”.
33. Look at the air gauges on the dashboard. Check for the red trailer supply and yellow parking brake buttons to pop out once the air pressure falls to the range between 20 and 45 psi. You can confirm the buttons’ state by hovering or grabbing each button with your virtual hand. Then activate the question icon with your laser pointer.
34. Answer Question 1: Did you see the parking brake buttons OUT?
35. If the parking brake buttons popped out, the correct answer is "Yes.”
36. If the parking brake buttons didn’t pop out, the correct answer is “No. Report the defect and have vehicle repaired immediately.”

***Part 2 - Parking Brake Check***

1. Grab the red trailer supply button with your virtual hand. Pull your hand toward you and release the trigger once the button is OUT.
2. This is required only if the button is IN.
3. Grab the yellow parking brake button with your virtual hand. Pull your hand toward you and release the trigger once the button is OUT.
4. This is required only if the button is IN.
5. Grab the cab door handle with your virtual hand to exit the cab.
6. Teleport to the tractor’s drive wheels.
7. Grab the wheel chock with your virtual hand and move your hand away from the tractor’s drive wheels. Release the trigger once the chock is out of the marked zone to remove the wheel choke. Both wheel chocks need to be removed.
8. Teleport to the cab door. Activate the door handle by grabbing it with your virtual hand and pulling toward you to enter the cab.
9. **[Manual Transmission only]** Activate the clutch pedal with your laser pointer.
10. Select the button for the next correct action for the clutch with your laser pointer.
11. Correct answer: “Press”.
12. Grab the key switch with your virtual hand. Turn your hand an eighth turn to the right. Hold it there until you hear the engine start. Release the trigger once the engine is started.
13. Activate the accelerator pedal with your laser pointer.
14. Select the button for the next correct action for the accelerator with your laser pointer.
15. Correct answer: “Press”.
16. Look at the timer that has appeared on the dashboard. It will start once the air pressure reaches 85 psi. Check the timer value when the air pressure reaches 100 psi. Then activate the question icon with your laser pointer.
17. Answer Question 1: Did the air pressure build properly?
18. If the timer ended in 45 seconds or less from 85-100 psi, the correct answer is "Yes.”
19. If the timer ended in more than 45 seconds from 85-100 psi, the correct answer is “No. Report the defect and have vehicle repaired immediately.”
20. Look at the timer. Check if the air pressure builds to 120 psi within a minute. Once the minute has ended, activate the question icon with your laser pointer.
21. Answer Question 1: Did the air pressure build to normal maximum capacity?
22. If the air pressure has built to 120 psi within a minute, the correct answer is "Yes.”
23. If the air pressure has not built to 120 psi within a minute, the correct answer is “No. Report the defect.”
24. Activate the accelerator pedal with your laser pointer.
25. Select the button for the next correct action for the accelerator with your laser pointer.
26. Correct answer: “Release”.
27. Activate the service brake pedal with your laser pointer.
28. Select the button for the next correct action for the service brakes with your laser pointer.
29. Correct answer: “Press”.
30. **[Automatic Transmission only]** Grab the gear shifter with your virtual hand. Move your hand along the shift pattern. Release the trigger once the "Drive" option is selected on the pattern.
31. **[Manual Transmission only]** Activate the clutch pedal with your laser pointer.
32. Select the button for the next correct action for the clutch with your laser pointer.
33. Correct answer: “Press”.
34. **[Manual Transmission only]** Grab the gear shifter with your virtual hand. Move your hand along the shift pattern. Release the trigger once the "1" (first gear) option is selected on the pattern.
35. Activate the service brake pedal with your laser pointer.
36. Select the button for the next correct action for the service brakes with your laser pointer.
37. Correct answer: “Release”.
38. **[Automatic Transmission only]** Activate the accelerator pedal with your laser pointer.
39. Select the button for the next correct action for the accelerator with your laser pointer.
40. Correct answer: “Partially Engage”.
41. **[Manual Transmission only]** Activate the clutch pedal with your laser pointer.
42. Select the button for the next correct action for the clutch with your laser pointer.
43. Correct answer: “Partially Engage”.
44. Check for vehicle movement through the windshield. Then activate the question icon with your laser pointer.
45. Answer Question 1: Did the parking brakes hold the vehicle in place?
46. If the truck didn’t move in the parking lot, the correct answer is "Yes.”
47. If the truck moved in the parking lot, the correct answer is “No. Report the defect.”

***Part 3 - Service Brake Check***

1. Activate the service brake pedal with your laser pointer.
2. Select the button for the next correct action for the service brakes with your laser pointer.
3. Correct answer: “Press”.
4. Grab the red trailer supply button with your virtual hand. Push your hand toward the dashboard, and release the trigger once the button is IN.
5. Grab the yellow parking brake button with your virtual hand. Push your hand toward the dashboard, and release the trigger once the button is IN.
6. Activate the service brake pedal with your laser pointer.
7. Select the button for the next correct action for the service brakes with your laser pointer.
8. Correct answer: “Release”.
9. **[Automatic Transmission only]** Activate the accelerator pedal with your laser pointer.
10. Select the button for the next correct action for the accelerator with your laser pointer.
11. Correct answer: “Partially Engage”.
12. **[Manual Transmission only]** Activate the clutch pedal with your laser pointer.
13. Select the button for the next correct action for the clutch with your laser pointer.
14. Correct answer: “Partially Engage”.
15. **[Automatic Transmission only]** Activate the accelerator pedal with your laser pointer.
16. Select the button for the next correct action for the accelerator with your laser pointer.
17. Correct answer: “Release”.
18. **[Manual Transmission only]** Activate the clutch pedal with your laser pointer.
19. Select the button for the next correct action for the clutch with your laser pointer.
20. Correct answer: “Press”.
21. Activate the service brake pedal with your laser pointer.
22. Select the button for the next correct action for the service brakes with your laser pointer.
23. Correct answer: “Press”.
24. Check for vehicle movement via the windshield. Then activate the question icon with your laser pointer.
25. Answer Question 1: Did the service brakes stop the vehicle without pulling or delay?
26. If the truck stopped moving and the steering wheel did not move left or right, the correct answer is "Yes.”
27. If the truck didn’t stop moving, the correct answer is “No. Report the defect and have vehicle repaired immediately.”
28. If the truck stopped moving but the steering wheel moved left or right, the correct answer is "No. Report the defect and have vehicle repaired immediately.”

***Wrap-Up and End***

1. Grab the gear shifter with your virtual hand. Move your hand along the shift pattern. Release the trigger once the "Neutral" option is selected on the pattern.
2. Grab the red trailer supply button with your virtual hand. Pull your hand away from the dashboard, and release the trigger once the button is OUT.
3. Grab the yellow parking brake button with your virtual hand. Pull your hand away from the dashboard, and release the trigger once the button is OUT.
4. Grab the cab door handle with your virtual hand to exit the cab.
5. Teleport to the Finish Inspection screen, and select "Finish Inspection" with the laser pointer.