NEW FLYER

SERVICE MANUAL BULLETIN

This Service Manual Bulletin is prepared by the Publications Department of New Flyer Industries Canada ULC. Refer to details below.

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APPLICABILITY					
VEHICLE LENGTH	☐ 30ft.	☐ 35ft.	☐ 40ft.	☐ 60ft.	■ ALL
VEHICLE TYPE	☐ High Floor	■ Low Floor	■ Invero	■ Xcelsior	☐ ALL
FUEL TYPE	☐ Diesel ☐ Diesel/Electric	☐ Electric ☐ Gas/Electric	☐ CNG ☐ Fuel Cell	☐ LNG	■ ALL
SUBJECT	**Testing Emergency/Parking Brake**				
SECTION TITLE	**8 - AIR SYSTEM**				
DETAILS	**This bulletin includes:** **1. A more efficient, combined Emergency and Parking Brake testing procedure.** **2. A new Emergency/Parking Brake test procedure for 60 Ft Articulated buses.** **This information supersedes any prior information on this subject already provided in your New Flyer Service Manuals. Make this Service Bulletin available to service personnel to inform them of changed information.**				

1. Procedures

1. Refer to 1.1. “Emergency/parking Brake & Check Valve Integrity Test (40 ft. Vehicle)” on page 3 in this bulletin for the 40 ft. vehicle test procedure and Refer to 1.2. “Emergency/parking Brake & Check Valve Integrity Test (60 ft. Vehicle)” on page 5 in this bulletin for the 60 ft. vehicle test procedure.

1.1. Emergency/parking Brake & Check Valve Integrity Test (40 ft. Vehicle)

☞NOTE:

The following procedure will test the operation of the parkinging brake system, emergency brake system, and emergency brake release system (where equipped). This procedure will simulate vehicle operation in emergency mode with loss of air supply at one or more tanks. Perform these tests in the sequence listed in order to avoid duplicate or redundant testing.

1. parking the vehicle on level ground and chock the wheels.
2. Start the engine and charge the air system to cut-out pressure.
3. Stop the engine.
4. Ensure the wheels of the vehicle are chocked and release the parking brake.
5. Drain the wet tank. The front and rear brake tanks should retain full pressure.

☞NOTE:

Refer to the General Information Section of your New Flyer Service Manual for tank draining procedures and location of air tank drain valves.

6. Drain the front axle brake tank. The low air warning lamp on the front brake tank gauge should illuminate and the low air buzzer should sound. The rear brake tank should retain full pressure.
7. With no air pressure in the front brake tank, make a service brake application. The rear axle brakes should apply and the rear brake lamps should illuminate.
8. Slowly drain the rear axle brake tank. The parkinging brake control valve should pop to the applied position when the rear reservoir reaches approximately 45 psi.

☞NOTE:

DO NOT use the brake treadle to bleed down the axle brake tanks. Rapid pumping of the brake treadle will cause pressure pulsations that can result in premature application of the spring brakes, resulting in a false pressure reading.

☞NOTE:

Ensure that the interlocks are NOT applied when bleeding down the system.

☞NOTE:

The following step applies to vehicles equipped with an Emergency Brake Release (EBR) valve. Otherwise, proceed to step 10.

9. Actuate the emergency brake release control by pressing and holding the knob in the down position. The parking brakes at the rear axle should release and remain released as long as the control is held in the down position. Release the control. The parking brakes at the rear axle should reapply. Repeat this cycle until the parking brakes fail to release. Drain the emergency brake release tank. The parking brakes should remain in the applied position.
10. Close all tank drain valves, start the engine, and recharge the air system to cut-out pressure.
11. Stop the engine and release the parking brake.
12. Drain the rear axle brake tank. The low air warning lamp on the rear brake tank gauge should illuminate and the low air buzzer should sound. The front brake tank should retain full pressure
13. With no air pressure in the rear brake tank, make a service brake application. The front and rear axle brakes should apply and release at least once, the rear brake lamps should illuminate, and the parking brake should remain released.

14. Test is complete. Close all reservoir drain valves, start the engine, and recharge the air system to cut-out pressure.
15. If the brakes do not operate as described in the test procedure, check the following for leakage and correct as required:
    a. Fittings.
    b. Kinked lines.
    c. Single check valves.
    d. Double check valves.
    e. parkinging brake control valve.
    f. Emergency release valve (if equipped).
    g. Brake relay valve.
    h. Spring brake modulating valve.
    i. Brake foot valve.
    j. ABS modulator valves.
    k. ATC valve (if equipped).

1.2. Emergency/parking Brake & Check Valve Integrity Test (60 ft. Vehicle)

☞NOTE:

The following procedure will test the operation of the parkinging brake system, emergency brake system, and emergency brake release system (where equipped). This procedure will simulate vehicle operation in emergency mode with loss of air supply at one or more tanks. Perform these tests in the sequence listed in order to avoid duplicate or redundant testing.

1. parking the vehicle on level ground and chock the wheels.
2. Start the engine and charge the air system to cut-out pressure.
3. Stop the engine.
4. Ensure the wheels of the vehicle are chocked and release the parking brake.
5. Drain the wet tank. The front, center and rear brake tanks should retain full pressure.

☞NOTE:

Refer to the General Information Section of your New Flyer Service Manual for tank draining procedures and location of air tank drain valves.

6. Drain the front axle brake tank. The low air warning lamp on the front brake tank gauge should illuminate and the low air buzzer should sound. The center and rear brake tanks should retain full pressure.
7. With no air pressure in the front brake tank, make a service brake application. The center and rear axle brakes should apply and release at least once and the rear brake lamps should illuminate.
8. Drain the rear axle brake tank. The center brake tank should retain full pressure.
9. Slowly drain the center axle brake tank. The parkinging brake control valve should pop to the applied position when the center reservoir reaches approximately 45 psi.

☞NOTE:

DO NOT use the brake treadle to bleed down the center axle brake tank. Rapid pumping of the brake treadle will cause pressure pulsations that can result in premature application of the spring brakes, resulting in a false pressure reading.

☞NOTE:

The following step applies to vehicles equipped with an Emergency Brake Release (EBR) valve. Otherwise, proceed to step 11.

10. Actuate the Emergency Brake Release control by pressing and holding the knob in the down position. The parking brakes at both center and rear axles should release and remain released as long as the control is held in the down position. Release the control. The parking brakes at both center and rear axles should reapply. Repeat this cycle until the parking brakes fail to release. Drain the emergency brake release tank. The parking brakes should remain in the applied position.
11. Close all tank drain valves, start the engine, and recharge the air system to cut-out pressure.
12. Stop the engine and release the parking brake.
13. Drain the center axle brake tank. The low air warning lamp on the center brake tank gauge should illuminate and the low air buzzer should sound. The front and rear brake tanks should retain full pressure.
14. With no air pressure in the center brake tank, make a service brake application. The front and rear axle brakes should apply and release at least once and the rear brake lamps should illuminate.
15. IIf the parking brakes applied in the previous step, verify that the emergency brake release (if equipped) is capable of releasing the parking brakes and that the parking brakes reapply when the control is released.
16. Verify that the parking brakes at both center and rear axles release when the parking brake control valve is in the released position.
17. With the parking brakes released, make another service brake application and verify that the front, center and rear brakes apply at least one more time.

18. Close all tank drain valves, start the engine, and recharge the air system to cut-out pressure.
19. Stop the engine.
20. Drain the rear axle brake tank. The low air warning lamp on the rear brake tank gauge should illuminate and the low air buzzer should sound. The front and center brake tanks should retain full pressure.
21. With no air pressure in the rear brake tank, make a service brake application. The front, center and rear axle brakes should apply and release at least once and the rear brake lamps should illuminate.
22. Test is complete. Close all reservoir drain valves, start the engine, and recharge the air system to cut-out pressure.
23. If the brakes do not operate as described in the test procedure, check the following for leakage and correct as required:
    a. Fittings.
    b. Kinked lines.
    c. Single check valves.
    d. Double check valves.
    e. parkinging brake control valve.
    f. Emergency release valve (if equipped).
    g. Brake relay valves.
    h. Spring brake control valves.
    i. Brake foot valve.
    j. ABS modulator valves.
    k. ATC valve (if equipped).