

Motorhome Air Brake Pre-Trip Check

Step 1 – Secure Motorhome

- 1) **IMPORTANT** - Chock rear wheels.
- 2) Visually inspect air brake components.
- 3) Start engine. Monitor air pressure. At >100 psi (690 kpa), shut off engine.
- 4) Retract leveling jacks and then retract all slides (*follow owner's manual for correct order*).

Step 2 – Park Control Valve (Park Brakes)

With engine shut down and key in "Run" position.

- 5) Push in Park Control Valve to release parking brake.
- 6) Open air system drains (should be 2 or 3) to bleed off air.
- 7) Monitor air pressure.
 - a. Confirm that low air pressure warning activates at ~ 60 psi (414 kpa).
 - b. Confirm that Park Control Valve pops out at 20 – 40 psi (138 – 311 kpa).
- 8) Shut drains.

Step 3 – Supply Circuit

You will need a watch or timer for this step.

- 9) Start engine and run at fast idle (1200 – 1500 rpm).
 - a. On some coaches, turn on cruise control and then push set button.
- 10) Perform Compressor Build-up Test.
 - a. When pressure reaches 50 psi (345 kpa), mark time.
 - b. Confirm low air warning shuts off (resets) at 60 psi (414 kpa).
 - c. When pressure reaches 90 psi (621 kpa), mark the time.
 - d. Time between 10a and 10c must be less than 3 minutes.
- 11) Confirm governor cut-out and cut-in pressure.
 - a. Build up air pressure to system maximum.
 - b. Pressure should hold at 120 – 135 psi (828 – 931 kpa). You should hear a brief release of air that signifies the governor has stopped building air. Note/record pressure.
 - c. Pump service brakes to reduce system air pressure.
 - d. Pressure should fall by 15 – 25 psi (103 – 172 kpa) **BELOW** cut-out pressure observed in step 11b before starting to increase. *Note: check owner's manual for normal range if actual values differ from above standards.*

Step 4 – Air System Leaks

- 12) Push in park control valve (release park brake).
- 13) Turn off engine. Note/record pressure.
- 14) Depress and firmly hold brake pedal down for 2 minutes.
 - a. Confirm that air pressure does not drop more than 4 psi (28 kpa).
- 15) Release brake pedal and pull park control valve to apply park brakes.

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Step 5 – Service Brake Response

- 16) Start engine. Ensure air system pressure is within normal operating range.
 - 17) Release park brake.
 - 18) Set automatic slack adjusters.
 - a. Step hard on brake pedal and depress fully, then release.
 - b. Repeat 3 – 4 times to ensure slack adjusters are properly adjusted.
 - 19) Remove wheel chocks. (*Important - Remember to set park brake while doing this and then release for the next part of the test*).
 - 20) Perform brake response test.
 - a. Depress and hold down brake pedal.
 - b. Put motorhome in gear.
 - c. With brake pedal depressed, push accelerator pedal to ensure motorhome does not move forward.
 - d. Release accelerator, engage park brake then release service brakes.
 - e. Push accelerator pedal to ensure motorhome does not move forward.
 - f. Release accelerator and put motorhome in neutral.
 - 21) Shut off engine. Do not operate motorhome if one or more of the following are true:
 - Park control valve did not pop out at 20 – 45 psi (138 – 311 kpa).
 - It took longer than 3 minutes to build up pressure from 50 to 90 psi (345 to 621 kpa).
 - Governor cut-in and/or cut-out pressure was out of allowed range.
 - System leakage is greater than 4 psi (28 kpa) in 2 minutes.
 - Motorhome failed the brake response test (service brake or park brake).
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Guidelines for braking with air brakes

When stopping on a level roadway, push gradually and firmly on brake pedal.

When driving on a down grade, **protect brakes from overheating**:

- Control speed with a combination of engine compression, transmission gear selection and auxiliary retarder (jacobs or exhaust brake). It is better to start the down grade at a slow speed, than have to reduce speed later.
Do Not Ride the Brakes.
- If the vehicle has an auxiliary retarder, it is important to select the correct gear as retarders are more efficient at higher engine RPM and lower vehicle speeds. Select the correct gear before starting down the hill. Use caution when using retarders on slippery road surfaces.
- If the vehicle speed is increasing above the chosen speed when descending a hill:
 - Apply brakes hard enough to reduce speed by 6 – 10 mph (10 – 16 km/hr.)
 - Downshift to a lower gear. *Note: You may have to repeat above step before transmission will downshift.*
 - Continue downhill using engine compression, transmission gear selection and the auxiliary retarder to control speed.
 - If speed continues to increase, repeat above steps. Do Not Ride the Brake.

Avoid applying service brakes when park brakes are engaged. This will put excessive force on the drive axle brake chambers if your coach is not fitted with anti-compound lines between service and park brakes.