



BANUR DRIVING SCHOOL LTD.

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AIR BRAKE
PRE-TRIP GUIDE

AIR BRAKE SYSTEM TEST

9-STEP SEQUENCE

Step-by-Step Procedure • Professional Reference • Banur Driving School Ltd.
Ensure you are in a safe location with wheel chocks applied before beginning.

PHASES: 1 — Compressor & Warning → 2 — Emergency & Mechanical → 3 — Valve & Recovery → 4 — Leak Test

PRE-TEST CHECKLIST — Complete before beginning any phase:

- Vehicle in a safe, level location
- Wheel chocks applied if required
- Engine running and gauges active
- Trailer attached and Glad Hands connected
- Red and Yellow buttons pushed IN (system charged)
- Confirm air pressure is at normal operating range before starting

QUICK REFERENCE: PASS / FAIL THRESHOLDS

#	CHECK	THRESHOLD	ENGINE STATE
1	Low Air Warning (light + buzzer)	At or above 60 psi	ON
2	Trailer Emergency Pop-Out (Red Button)	Between 45–20 psi	OFF / Ign. ON
3	Spring Brake Mechanical Check	90° Slack Adjuster Angle	OFF / Ign. ON
4	Tractor Protection Valve Check	No air leak	OFF / Ign. ON
5	Compressor Build-Up Rate	50 to 90 psi in < 3 min	ON (1000–1200 RPM)
6	Compressor Cut-Out	105–135 psi	ON
7	Compressor Cut-In	Cut-in 20 psi below set range	ON
8	Static Leak Test Setup	80–90 psi Brake Application	OFF / Ign. ON
9	Pass Standard: Max Air Drop	Max -4 psi with trailer Max -3 psi bobtail	OFF / Ign. ON

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PHASE 1: COMPRESSOR & WARNING CHECKS

⚠ Engine Condition: Engine running. Air pressure at normal operating range.



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STEP 1	Low Air Warning Pump the brake pedal with the engine ON. The low air WARNING LIGHT and BUZZER must activate at or above 60 psi. Both the visual and audible alerts must trigger.	60+ PSI
→	ACTION: Turn the engine OFF after this test. Leave ignition ON so gauges stay active.	

STEP 2	Trailer Emergency Pop-Out Continue pumping the brake pedal. Between 45 and 20 psi, the Trailer Air Supply (Red Button) must automatically pop out. This confirms the trailer emergency brakes have applied a critical safety function.	45–20 PSI
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STEP 3	Spring Brake Mechanical Check Exit the cab and visually inspect the trailer on BOTH sides. Look for the Slack Adjuster to be at approximately 90 degrees to the Push Rod. This angle confirms the mechanical spring brakes are fully holding. Also check with your Pry Bar the Push rod must not travel	Visual & Physical Check
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PHASE 2: EMERGENCY & MECHANICAL CHECKS

⚠ Engine Condition: Engine OFF. Ignition remains ON.

STEP 4	Tractor Protection Valve Check Disconnect both Glad Hands at the rear of the tractor. There must be NO air leaking from the lines. Press and hold the foot brake for 5 seconds there must still be no air leak. This confirms the Tractor Protection Valve has closed to preserve tractor air. Before reconnecting, check rubber seals for cuts or cracks.	No Leak PSI
STEP 5	Compressor Build-Up Rate Restart the engine. Bring RPM to 1,000–1,200. Air pressure must rise from 50 to 90 psi in LESS THAN 3 minutes. Watch both primary and secondary gauges rise together.	50→90 PSI
→	ACTION: Push the Red AND Yellow buttons IN after this test to charge the system.	

PHASE 3: VALVE & RECOVERY TESTS

⚠ Engine Condition: Spring brakes applied. Perform valve checks with engine running.

STEP 6	Compressor Cut-Out With engine running, watch the gauges. Needles must stop rising between 105 and 135 psi. Confirm by hearing the 'sneeze' sound from the air dryer exhaust this is the governor unloading.	105–135 PSI
STEP	Compressor Cut-In	85–80 PSI



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7 Pump the brake pedal to reduce pressure. The compressor must cut back in before pressure drops 20 psi below the cut-out range. Confirm by watching the needles begin rising again. **Cut-in must occur by 85–80 psi.**

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PHASE 4: THE LEAK TEST — FINAL EVALUATION

⚠ Engine Condition: Build pressure to maximum (approx. 125 psi) before beginning.

STEP 8 **Static Leak Test Setup**
Turn the engine OFF. Press and hold the foot brake to make a full 80–90 psi application. Once the gauge stabilizes, start a 1-minute timer. Hold the Brake pedal for the full minute.

**80–90
App.
PSI**

→ ACTION: Turn the engine OFF before starting the timer.

STEP 9 **Pass Standard: Max 3-4 psi Drop**
Hold the brake for the full 1 minute. Air pressure must NOT drop more than 3-4 psi. Also listen actively for any audible air leaks outside the cab. Any drop over 3-4 psi is an automatic fail. Release the brake and check for further leaks.

**Max
3–4 psi
PSI**

! **PASS/FAIL:** A pressure drop greater than 3-4 psi during the static leak test is an automatic fail. After completing all 9 steps, ensure both the Red (Trailer Air Supply) and Yellow (Parking Brake) buttons are pushed IN and the system is fully charged before moving the vehicle.

KEY VALVE IDENTIFICATION

BUTTON	COLOR / SHAPE	PURPOSE
Trailer Air Supply	Red Octagon	Controls trailer air supply. PULL to exhaust trailer air (trailer emergency brakes ON). PUSH to supply air (system charged). NOT for parking.
Parking Brake	Yellow Diamond	Controls spring brakes on tractor/truck. PULL to apply parking brakes. PUSH to release. Use for parking only.

9-STEP SEQUENCE SUMMARY

- Phase 1 (Steps 1–3):** Low Air Warning (60+ psi) • Trailer Pop-Out (45–20 psi) • Spring Brake Check (90° angle)
- Phase 2 (Steps 4–5):** Tractor Protection Valve (no leak) • Build-Up Rate (50→90 psi in <3 min)
- Phase 3 (Steps 6–7):** Cut-Out (105–135 psi) • Cut-In (by 85–80 psi)
- Phase 4 (Steps 8–9):** Static Leak Test (80–90 psi application) • Max 4 psi drop / 1 minute • AUTOMATIC FAIL if exceeded

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