



REVIEW OF THE PBS DIRECTIONAL STABILITY UNDER BRAKING (DSUB) STANDARD

AUSTRALIAN TRUCKING ASSOCIATION SUBMISSION 29 JANUARY 2024

1. About the Australian Trucking Association

The Australian Trucking Association (ATA) is a united voice for our members on trucking issues of national importance. Through our [ten member associations](#), we represent the 59,000 businesses and 200,000 people who make up the Australian trucking industry.

2. Introduction

The Australian Performance Based Standards (PBS) Scheme is a voluntary opt-in regulatory system designed to allow more productive commercial vehicles access to the road network, provided they pass safety and infrastructure protection standards.

The latest version of the Directional Stability Under Braking (DSUB) Standard mandates adherence to the editions of ADR 35 and ADR 38 in effect at the time of the PBS application. Additionally, it stipulates the necessity of CAN/EBS communication between the truck and each of the TEBS units installed.

PBS standards cannot be applied retrospectively. However, any existing PBS combination or vehicle element seeking new approval or forming a new combination will be required to adhere to the updated DSUB requirements.

P1.3(b) states that:

- All combination vehicle/s:
 - Must have a functioning TEBS wiring network to support CAN communications across the entire combination, with **adequate** power to maintain functionality of the Trailer Electronic Braking System (TEBS) of all trailers and dollies in the combination.

The ATA submits that the term 'adequate' is not defined in the draft standard and may cause confusion or ambiguity in its application.

3. The ATA notes the existence of the WA Performance Based Standards (PBS) Scheme – Road Train TEBS Voltage Test Procedure and its potential to reduce ambiguity in terms of defining ‘adequate’

The ATA supports the amendments in the draft DSUB standard but submits that the term ‘adequate’ is ambiguous. NHVR officers should ensure wiring continuity for single trailer and B-Double combinations, which may have a supply voltage of either 12 or 24 volts. Road train combinations require a supply voltage of 24 volts. If officers require further guidance for road trains, the ATA recommends they utilise the WA Performance Based Standards (PBS) Scheme – Road Train TEBS Voltage Test Procedure.

Attachment One

The WA Performance Based Standards (PBS) Scheme – Road Train TEBS Voltage Test Procedure exists to determine what constitutes ‘adequate’ in terms of power to support the Trailer Electronic Braking System (TEBS) of all trailers and dollies in the combination, as referred to the in draft. The procedure reads as follows:

Step 1 – Vehicle set-up:

- a. Ensure all air couplings throughout the combination are connected and taps turned on (service and supply).
- b. Ensure all lighting and EBS electric lines are connected throughout the combination.
- c. Turn on the prime mover / rigid truck (engine running) or the equivalent power supply and ensure there is a minimum of 24V across pins 1 and 4 (EBS connector main power supply), without load.
- d. Charge up the brake air system to operating pressure (7Bar / 700kPa / 102psi minimum).

Step 2 – Diagnostic system set-up:

- a. Connect TEBS diagnostic equipment as per the TEBS OEM’s instructions. The port on the front of the rear trailer or the side port at the rear of the rear trailer can be used to connect the TEBS diagnostic equipment.
- b. Ensure CAN (diagnostic connection) relates to the last trailer / TEBS unit.
- c. Open the overview screen.
- d. Ensure there is approximately 24V at the rear trailer connector across Pins 1 and 4 (main power supply) and across pins 2 and 3 (ignition power), without load.
- e. Ensure brake air supply pressure is above 7 Bar (red coupling) at the rear trailer via the diagnostic equipment.

Step 3 – Diagnostic test:

- a. Apply service brake for at least 15 seconds, release and allow the brake air system to recover. Repeat 3 times.
- b. Whilst brakes are applied and released, monitor the voltage on pins 1 and 4, either directly at the connector or via the TEBS diagnostic equipment.
- c. Record findings. A minimum of 10V DC is required.

Step 4 – Recording Results:

- a. Go to diagnostic memory.
- b. Make a note of or print result and keep a record.
- c. If there is a low voltage error, this indicates the system did not pass.

Address the excessive voltage drop, clear the memory and retest from step 1.