

Class 484 EMU

Depot Driver Conversion Course

5. Taking Power, Acceleration and Braking

Power & Brake Controller (PBC)

The Power and Brake Controller has the following positions:-

- Brake positions 1-3 & Emergency
- Hill start Button
- Off position
- Power notches 1-7

Power Notch 1 – Depot Driving

Power Notch 2 – Speed Hold on straight Level Track

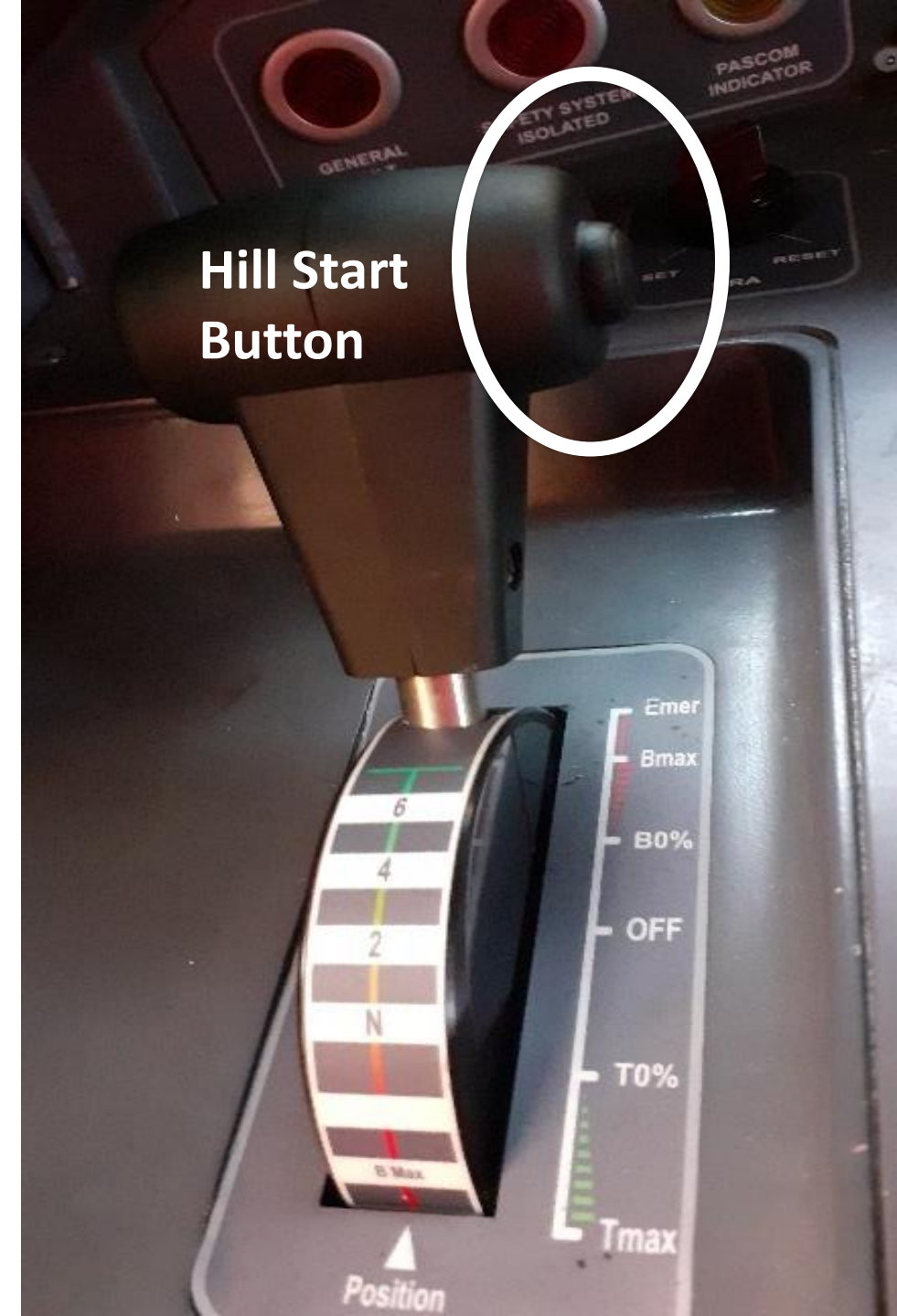


Braking

The Power and Brake Controller (PBC) has several braking positions available.

- ❑ Push the PBC forward to the first notch; this is the step one position and will give you approximately 1 ½ bar in the brake cylinder,
- ❑ Push the PBC forward another notch to step two; this will give you approximately 2 ½ bar in the brake cylinder.
- ❑ Push forwards one more time to notch 3 (Bmax, Full service) and you will receive just over 3 bar in the brake cylinder.
- ❑ Push the PBC into the emergency position (fully forwards) an emergency brake application will occur of 3 ½

All the brake steps except for emergency are also accompanied by dynamic braking, if the dynamic braking is working correctly you may not receive any indication at all in the brake cylinder however you will still feel the retardation in speed.



Braking Instructions

Step 1 should be used for initial braking, with progressive braking towards step 2 and 3 if required.

Due to the effectiveness of the tread and dynamic brakes, heavy braking should be avoided.

The brake should not be 'feathered' between steps. (moving from one step to another and back again in quick succession)

When coming to a stop, ensure the PBC is in braking step 1.

If WSP is experienced, placing the PBC to step 2 or 3 will provide automatic sanding. If in doubt of stopping, select emergency.



Taking Power

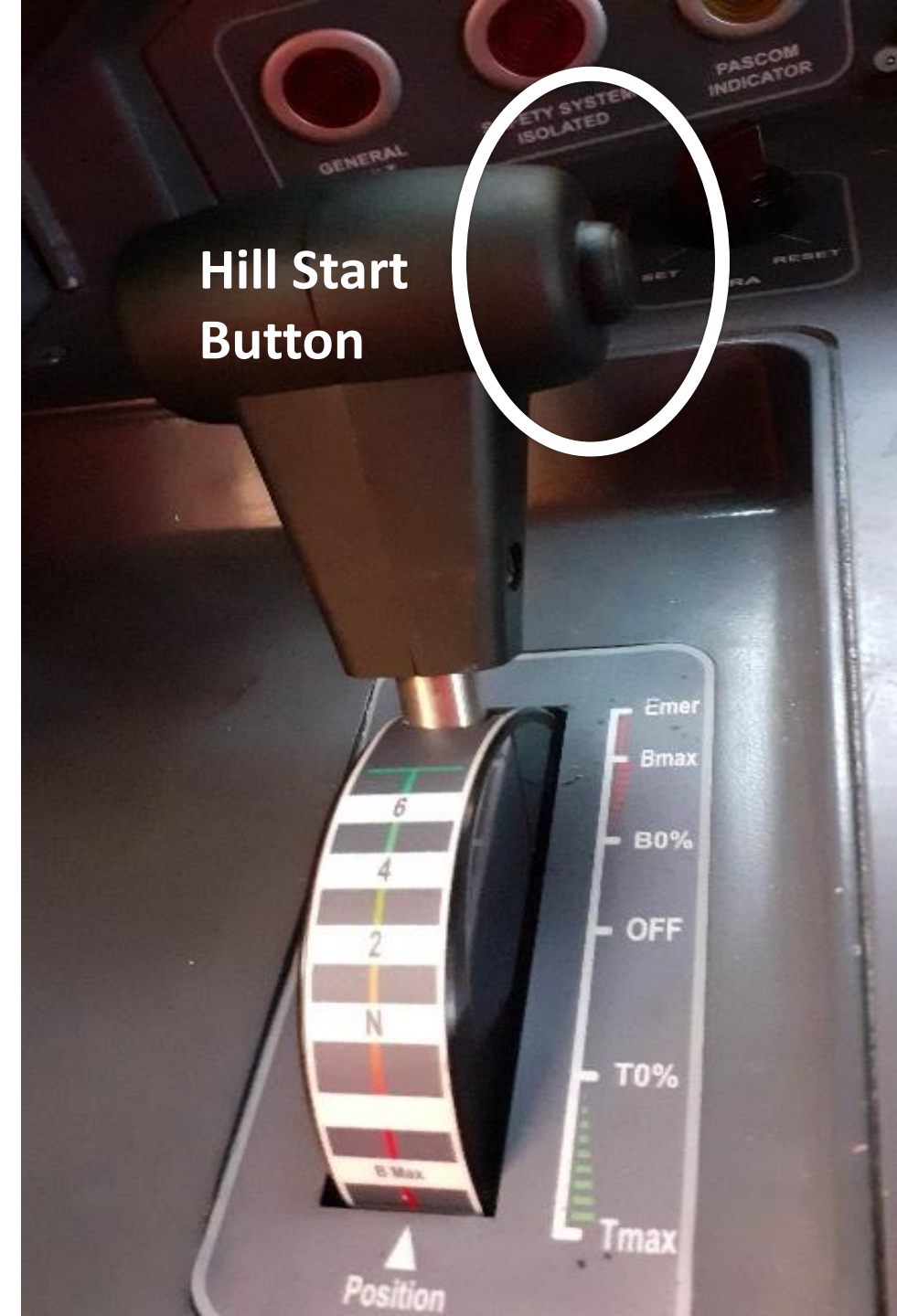
Taking power should be progressive.

Drivers should not take full power until 20mph (Vivarail requirement).

The PBC should be placed in the lowest power setting for a few seconds before placing to OFF or initiating a brake application (unless exceptional or emergency circumstances).

The Hill Start Button should **ALWAYS** be used when power is taken, even if the unit is on a downhill gradient.

The Hill Start Button will hold a Step 1 Brake Application until 6mph, then automatically release.



Taking Power (continued)

If wheel slip (WSP) is experienced, reduce power to avoid damage to the wheels or railhead.

If wheel slip (WSP) is experienced, then sanding in traction is available

Drivers are instructed not to sand through point work wherever possible





Acceleration Risks

- ❑ Beware of the potential for rapid acceleration due to the unit having newer (overhauled) traction motors.
- ❑ The rapid acceleration (compared to a Class 483) also presents a risk of Drivers reaching higher speeds than intended over PSRs.
- ❑ There are speed governors fitted to Class 484 units to prevent the train from continuing to accelerate once the maximum speed of 45mph is reached.