



1st November 2020

## Testing Starts on Mock-Up Cab

As your nominated RMT upgrades rep, I recently attended two meetings concerning the new Piccadilly Line stock. The deliberations of the second meeting are explained overleaf.

### First Meeting

At the first meeting, a remote mock-up of the proposed new cab was on display via video link from Germany. Three people of different heights (6' 1", 5' 9" and 5' 1") were tasked with undertaking activities within the cab.

Some of the observations included:

- Person 1 found it tight to walk between the driver's seat and cab door to exit/enter cab.
- A request was made for under carriage lighting for cab entry/exit steps from track level.
- The grab rails for cab entry/exit appeared ok.
- For cab M-door access there's only one step up on one side, a wider, non-slip, step up on both sides was requested.
- Drivers will have the option to sit, stand upright or lean back and drive.
- Driver's seat has armrests and person 1 would benefit from armrests being wider.
- The cup-holder is not accessible when the TBC is in a motoring position and an alternative cup-holder location is required (but apparently nowhere else to locate it).
- Request made to lift drivers control panel to reduce posture leaning.



- Coverage of both windscreen wipers needs to be checked.
- Sunblind obscures forward view of driver's and I/Op's position for persons 1 and 2 standing upright.
- Request made to replicate sighting of signals on gantries/posts from all cab positions for both driver and I/Op.
- All cab sight lines, for all signals, to be reviewed.
- There is limited head space above I/Op seat.
- Request made for I/Op footrest to automatically stow in the upright position.
- Person 3 could not see the required 5 metre track side marker from the I/Op seated position (the question was asked why this hadn't been noticed for this prior to physical cab mock up).
- There's a 2kg force required to move seat from active/inactive position.
- Boarding train from higher platforms, and seat upright, needs an easily accessible latch near the top of the seat to reduce leaning over.
- New train sits slightly lower in platforms.
- Gaps between platforms and cabs needs to be considered.
- Person 3 struggled to access seat tilt adjuster from track level.
- Request made to improve overall cab windscreen area to improve sight lines as cab may look nice from the outside but a driver's viewing area is restricted as a result.

## Second Meeting

- The virtual new cab overview meeting was set up utilising a test train driver in their workshop in Germany. The driver was 5ft 9” (76 percentile male).
- The traction brake controller is a swivel and push design, the left arm rest isn’t designed for use when motoring. No downward pressure is required on the TBC. A request was made to make both drivers armrests vertically adjustable to help a driver’s personal choice for setting up the seats overall comfort.
- The seat will have adjustable lumbar support and all seat adjusters will be clearly labelled to assist a driver preferred setting.
- A request was made to have a foldaway cup holder on the end of the right armrest as the existing cup holder is not fully accessible when TBC in motoring position. Unsure if driver was over leaning to the right when motoring and using right arm rest, as it appeared the drivers most comfortable seated position but bad posture.
- Independent ergonomic input into the cab design (especially the seats) was requested at this design stage and not once cab was near completion! Independent assurance on ergonomic standards compliance must be provided.
- Other rolling stocks to be reviewed to gauge distances between seat and bulkhead for entry/exit of cab.
- The driver could not satisfactorily see the road ahead with the sun blind down and the sun blind needs to be redesigned.
- Asked if door buttons are within shrouds to prevent unintentional operation. The door close button also illuminates as the pilot light.
- A request was made to have screens with adjustments for lighting as some drivers prefer a darker cab.
- A request was made to have a unique audible alarm for ‘front tripcock operated’ and also a standalone ‘rear tripcock operated’ visual in cab to assist with defect handling procedure.
- There is a SCAT indication by the train’s speedometer.
- There is a traction current on/off indicator in cab but this must not be used as confirmation traction that current is discharged.
- A request was made for an audible alarm if pilot light is lost (explained recent door opening irregularity - events and problems with no alarm in off and release).
- Shrouds requested for all buttons on drivers control panel.
- A priority call (between a normal call and a mayday) suggested for PEA operated and a SPAD, to reduce time waiting in call stack - this request will be considered.
- A request was made for the selective door close option to be considered but against auto door close at terminus points due to passengers being trapped in doors.
- The GOA (grade of operation) for this train is a ‘one’, which means, ‘must have a driver’!
- Questions were asked about the functionality of forward facing and obstacle detection technology that appeared to be on the train! Siemens will respond to this query.
- The coat hook and emergency pod are located by ‘J’ door but haven’t been viewed yet.

If you think any of the ideas mentioned are any good (or not!) please contact your reps. Continuous updates will be provided, all feedback is welcome via your reps (see my details at the bottom of the page), and this will be relayed to the relevant project teams.

*Dave Rayfield (Upgrades Rep)*