

#### by Unipart Rail

#### **TPWS** four<sup>©</sup> For ETCS equipped trains

# The Challenge

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With the roll-out of ETCS train builders and operators are required to upgrade other train safety systems.

This is particularly important for the TPWS and AWS train safety systems as there has to be reliable hand-overs between these systems and the train ETCS system as the train moves in and out of areas that have ETCS infrastructure.

Our customers needed ETCS compatible TPWS and AWS systems for their new passenger train fleets.

## The Solution

Unipart Rail's TPWSfour and AWS systems, which are designed and manufactured in house, are equipped with the latest Evo control unit are fully compatible with the rail industry standards and ETCS requirements and have proven high levels of reliability in service.

Unipart Rail product innovation team analysed the requirements of ETCS and designed the relevant developments required for TPWSfourEVO to work in harmony with ETCS. This includes significant testing to ensure that the new system continued to function in non-ETCS areas.

Specifically, they needed to ensure that the TPWS and AWS systems go silent but continue to self-test in ETCS areas ready to take over as the train safety systems when ETCS gives the hand-over command.

The Unipart Rail TPWSfour and Evo products have been selected for fitment on several ETCS equipped passenger trainsets and locomotives.



Systems supplied for ETCS equipped trains so far are:

- Class 195 116 systems
- Class 196 48 systems
- Class 197 154 systems
- Class 397 24 systems
- Class 700 230 systems
- Class 707 60 systems
- Class 717 50 systems



## The Result

The TPWS and AWS systems have proved to be extremely reliable in service and have clocked up over 14 million miles on the ETCS equipped Class 700 trains alone.

Calculated TPWS/AWS system availability is 99.999%

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