

# Advanced Radiators discusses its Direct Replacement SMART Transmission Combi-Coolers

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*In a piece written for Rail Business Daily, Advanced Radiators discusses the latest technology it has on offer.*

In recent years it has been observed that there is significant degradation of both the Class 158/159 350hp and 400hp Transmission Combi-Coolers. When receiving transmission combi-coolers for overhaul, the defects that have manifested themselves during an overhaul are severe e.g.

- Significant number of tube failures, in some cases are due to previous poor repairs.
- Tube plate fractures and solder fractures.
- Severe corrosion and pitting of the transmission shells leading to by-pass and loss of cooling efficiency.
- Fretting of the tube bundle due to movement caused by corrosion and loss of interface (results in high levels of Cu in spectrographic oil analysis).
- Transmission and hydraulic shell cap ends suffering with corrosion and some material loss of the flange internal bore.



Advanced Radiators have been approached by several operators requesting new build 'Direct Replacement SMART Transmission Combi-Coolers'. Advanced Radiators have successfully completed significant testing of both the 350hp and 400hp 'Direct Replacement SMART Transmission Combi-Coolers' statically and in service.

The SMART Transmission Combi-Cooler allows the operator to accurately measure intrusively, the water and oil parameters by the test point porting on both the transmission and hydrostatic sections of the combi-cooler.

The 'Direct Replacement SMART Transmission Combi-Coolers' have been on trial circa six months. The combi-coolers also worked successfully through the significant hot period recently experienced with no thermal related defects to date.

A Technical Review and Sign Off for the Class 158/159 350/400hp Advanced Radiators 'Direct Replacement SMART Transmission Combi-Cooler' is available on request. The Technical Review and Sign Off has been completed by a recognised rail industry consultancy ICP.