AC Cars
Railbus
W79978

Restoration update March 2025

After a very successful running season in 2024, the restoration of W79978 has continued through the winter months.

The outer panel refitted following last winter's body frame repairs has had all the rivet heads filled to create a smooth surface and has received several base coats of paint. The final gloss paint will be applied when the weather is more suitable and the mechanical works for this winter are completed, to reduce the risk of damaging the finished surface.

In addition to the panel repairs, here you can also see evidence of the other work being carried out, on the bench at the front are the radiator cooling fan and an axle bearing housing. The corner of the railbus nearest the camera has been raised on jacks to allow the axle bearing to be inspected, and on the other side are the containers which the engine coolant has been drained into.

The axle bearings have all been inspected. This involves lifting the Railbus with hydraulic jacks and removing the suspension Chevron springs and axle bearing housing. The old grease is then removed, and the bearing carefully cleaned for a thorough visual inspection.

Three of the four bearings were found to be in good condition and have been reassembled. the fourth one unfortunately has corrosion damage and will be replaced.

Fortunately, the bearing is still obtainable, and a replacement has been purchased. Unsurprisingly a bearing of this size does not come cheap!

We now have the task of fitting the new bearing, hopefully this will be an easier task than removal of the defective one, which turned out to be quite a challenge.

One area requiring attention which was highlighted during last year's running days was the excessive wear in the engine cooling fan.

The fan is driven from the engine through V belts, onto a right-angle drive gearbox which then drives a cardan shaft and finally the fan itself, mounted behind the radiator.

The right-angle drive unit has had new oil seals fitted on both input and output shafts.

The input from the engine is to the V belt pulley at the left of this picture, the rotation is then transferred through 90 degrees and output at the rectangular flange on the right of the unit, to which the Cardan shaft is fitted.

The original Cardan shaft was excessively worn in both universal joints and the sliding section.

A new shaft was made by Propshaft Services of Feltham.

New flange bolts were also purchased of the correct forged and shouldered type.

The fan housing has been shot-blasted and repainted, and the cooling fan reassembled with new bearings and seals.

All the components have now been refitted to the vehicle. The radiator is next to be installed, and the cooling system refilled.

Interior heating for the Railbus is provided by a standard DMU type Smiths heater. This is mounted under the vehicle and operates by burning diesel fuel in the combustion chamber, air is passed over the outside of the heat exchanger by an electrically driven fan and transferred through ducts to the interior of the passenger compartment.

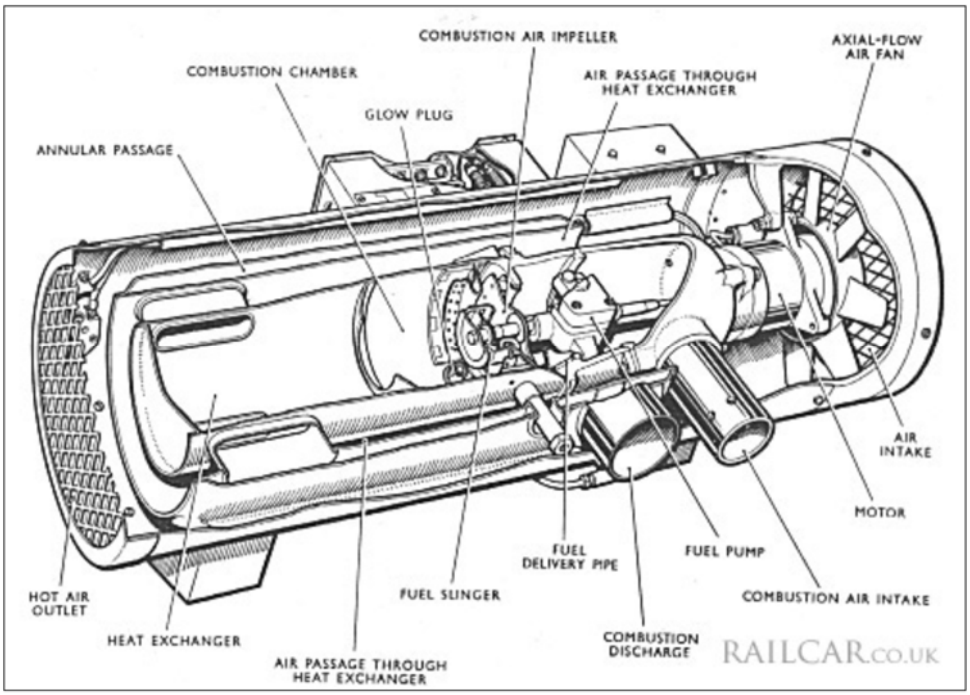

Image courtesy of Railcar.co.uk

The heater has been removed for overhaul as it was very noisy when operating.

The motor has now been rebuilt with new bearings, the fuel pump overhauled, and many other components cleaned, inspected and painted ready for reassembly. The heat exchanger requires some welding repairs to be completed before it can be refitted and the heater reassembled.

Retrimming is almost complete on the bay window seats at each end. Much of the original wooden framework for these had rotted away so there is a process of fit, remove and adjust then refit to get them just right.

Many thanks to the upholstery team, Stan and Philippa for their hard work and attention to detail.

And to finish off this update, a couple of pictures from last year...

The original Kemble to Tetbury train staff, Kindly loaned to us by Stephen Randolph, which was carried on the Railbus during our Kemble branch line anniversary weekend in April 2024

Along with an original running-in board, part of a much larger sign from Kemble