

# Technical development and innovation in wagon design

During the period covered by this publication, driven by customer requirement and the increasing demands being placed on its products, Standard Wagon had to remain at the cutting edge of wagon design. The following pages cover some of the technical advances utilised during this time, several of which were developed by the company itself.

## Suspension

In the 1960's the standard suspension was a multi-plate leaf spring with a link suspension which was either UIC double or BR single link suspension. This system was at its technical limit, the demand for heavier wagons with lighter tare weights became too much for this



type of spring to cope with. BR developed the 'Taperlite' spring which gave a superb ride and could cope with 25 Ton axleloads and light tare weights, it was however, prohibitively expensive to produce. A simplified 'Parabolic' taperleaf spring was developed which retained many of the advantages at much less cost and many wagons were converted to this spring.

From 1970 onwards wagons began

to be fitted with a new suspension type which utilised a pedestal suspension arrangement incorporating coil springs and friction damping. These suspensions were made by either BSC or Gloucester Carriage and Wagon Co. Many wagons were fitted with this suspension over the next 20 or so years, the coil springs were easy to tailor to wagon tare weight variations and damping was much more controllable.

*Above*

*BR Taperlite suspension arrangement.*

*Photo S Morris*

*Right*

*BSC Pedestal suspension*

*Photo P Garland collection.*

