

THE DESIGN OF HSFV-5

This report provides a technical description of the two-axled freight vehicle design HSFV5. It includes a listing of the parameter specification, and a prediction of the resulting dynamic performance. Loading cases, mechanical design and costs are also covered, including a description of the load-conscious dampers. The report pre-dates the building of the vehicles.

The predicted performance indicates that HSFV5 will be serviceable, although not as good as the preceding HSFV4. A number of parameters, established prior to the suspension design, have moved adversely, and their combined effect has proved more serious than was originally expected. However the vehicle ride is still expected to give a major improvement relative to conventional two-axled vehicles. The cost of the suspension, although a useful reduction relative to HSFV4, is still high. This suggests that further mechanical refinements should be investigated to reduce cost, giving priority to changes that also tend to improve performance.