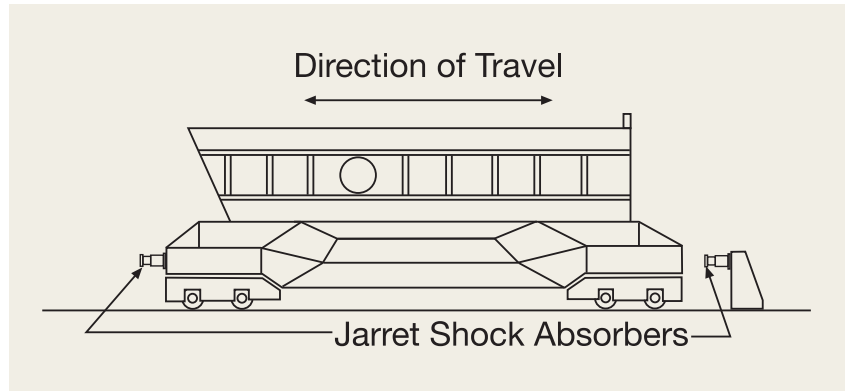


## Scrap Transfer Car Jarret Shock Absorber Application

### Application Overview

The scrap transfer car transfers the loaded scrap metal hopper from the scrap yard to the electric air furnace at which point the scrap hopper is lifted from the transfer car and its contents discharged into the electric arc furnace by the scrap charging crane. The scrap car operates under a heavy duty cycle at relatively high speed. The electric supply to the transfer car is normally disconnected by limit switches in the event of the transfer car traveling too close to the track end-stops.



### Problem

If the limit switches or their associated controls malfunction, the transfer car can run into the end-stop with the full force of the drive system. The end-stop bumper is therefore required to absorb not only the kinetic energy of the fully loaded car, but also the potential energy of the drive system. If a conventional hydraulic shock absorber is used for this application, the drive force will continue to compress the shock absorber until all of its stroke is used up at which point any residual energy has to be absorbed by deflection of the transfer car structure or the end-stop assembly.

### Product Solution

The Jarret elastomeric shock absorber has a progressively increasing reaction with respect to stroke so that, as the bumper is compressed, a point is reached where the bumper reaction equals and then exceeds the force of the drive system. This allows the remaining stroke of the bumper to absorb the kinetic energy. If the bumper is properly selected, both the kinetic and potential energies will be absorbed before the bumper reaches its maximum stroke resulting in a smooth progressive stop with no sudden jarring.

The Jarret units can be mounted on the cars to impact against the end structure or they can be mounted on the end stop structure that the car impacts.

An inventory of standard sizes provides ready availability for most applications. Factory repair is available to recondition worn units if required, thus assuring long economical service.