

### 3.0 Data and Results

The cryogenic container was significantly lighter than the load limit of each of the well cars, and as such the resulting loads for the cryogenic container were significantly lower than those induced by standard AAR double stack load conditions. Figure 1 below shows a bar graph which compares the loads from the fully loaded Thrall design, fully loaded Greenbrier design, and the cryogenic container. Each load indicated is the force reacted at one restraining lug for any given load case. The reaction loads for the lateral and longitudinal loads are also assumed to react at one set (two) restraints on one end or side in relation to the direction of load application.

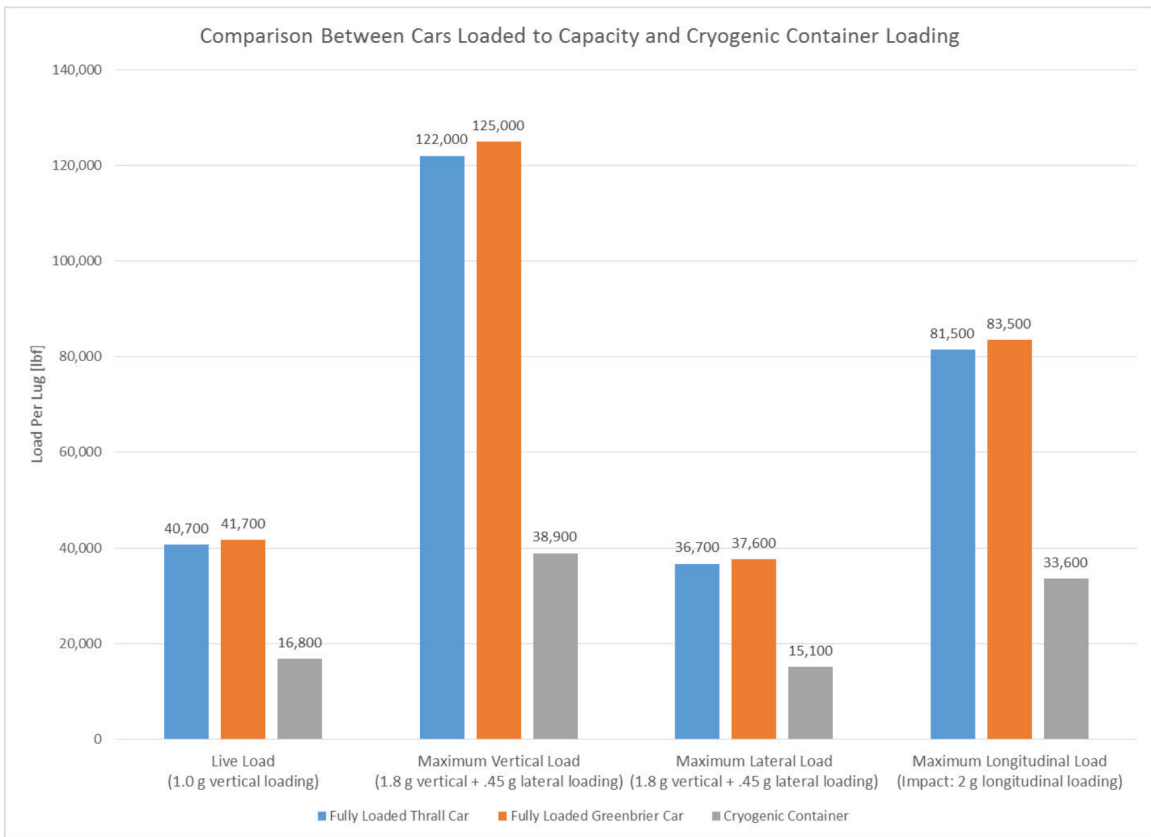


Figure 1: Load Comparisons between Fully Loaded Cars and Cryogenic Container

For all of these load cases, the cryogenic container reaction forces were significantly lower than that of the rated loading conditions for both cars. Another means of comparison is to show a relative factor resulting from the reduction in reaction forces. Figure 2 shows an improvement factor in regards to the reaction load for each well car carrying the cryogenic