

All Electric Actuators for Active Seat Suspensions

Application: Active seat suspension systems in large vehicles, trucks, tractors and ships offer an ergonomic benefit to drivers and riders by minimizing operator movement. Large vehicles that are driven over rugged terrain or on rough seas can impart severe motion to the operator. By sensing a vehicle's movement, active seat suspension systems position the seat such that the seat movement of the operator is reduced. Active seat suspensions can isolate the operator from nearly all of the seat motion seen in most large vehicles, trucks, tractors and ships.

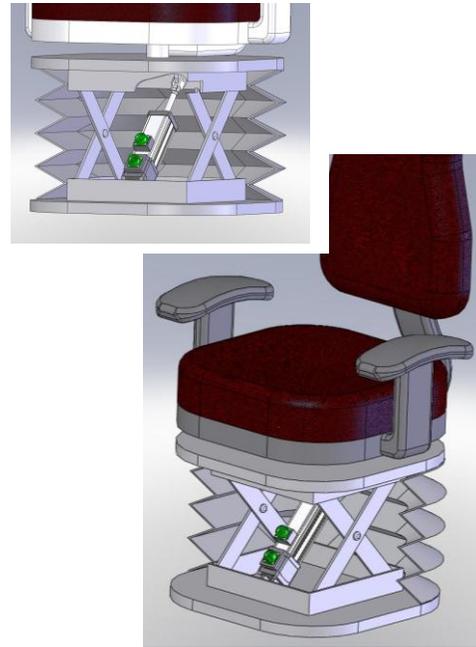
Typically, seat suspensions have been controlled with oil or air cylinders. Electric solutions remove all of the mess and inefficiency that goes along with those outdated technologies. Electric solutions reduce the installation cost of an active seat suspension system because the cost of running wire is much cheaper than running hydraulic lines. Additional benefits of electric solutions include reduced fire hazard and less energy required to power the system.

Exlar offers actuators that provide the ideal ALL-ELECTRIC solution for active seat suspension systems. Exlar's patented all-electric servo linear actuators offer the most compact electric actuator foot print on the market making them an excellent choice for mounting in the confined spaces allowed under an active suspension vehicle seat.

The excellent response capability of Exlar's actuators, especially when compared to the slower response of hydraulic actuators, makes them well suited and ideal for an active seat suspension system. Accelerometers and motion sensors capture the movement of the vehicle, and with Exlar's advanced servo technology the motion of the actuator 'cancels' out most of that movement. This is accomplished by moving the seat up or down to keep the driver stable and ergonomically protected from the rough ride of large vehicles, trucks, tractors and ships.

Exlar's Tritex actuators offer a fully integrated solution including actuator, motor, drive and controller all in one integrated package. The Tritex series of actuators allow integration of an all electric active seat suspension system without the need for external servo amplifiers taking up space elsewhere in the vehicle. With input voltages ranging from 12 to 48 volts, the DC Tritex solutions are available to run off the electrical power available in most trucks, tractors and ships. Their compact package and multiple available standard and custom designs make them a perfect choice to use in any active seat suspension system.

Exlar also offers the GS series actuators for those applications that have performance ratings that exceed the Tritex, or space constraints that require an even smaller foot print. The GS actuators offer the same patented Exlar electric actuator technology for use with separate servo amplifiers.



Tritex Actuator



GS Actuator



Call us today at 952-500-6200 to discuss your application requirements and learn more about the benefits of an Exlar solution!