Damper and Egress Damper System (EDS)

Bulletin 0600-B90-1

Damper System

Parker Hannifin's Damper product is a passive hydraulic speed control with lock solution. It safely controls the opening and closing of heavy armored doors to prevent injury or vehicle damage. The locking feature enables A and B kit doors to be locked in any position, allowing for safe and easy exit and entry into the vehicle. In many cases, the Damper is a simple and cost effective solution to control door speeds without the need for a powered Door Assist System.

Egress Damper System (EDS)

However, in cases where power is required to open a heavy door in a vehicle flipped condition, the Egress Damper System (EDS) is the product of choice. The Egress Damper System (EDS) incorporates a Pneumatic Door Assist to power an A or B kit door in a vehicle flipped condition. It is pin-pin interchangeable with the Damper product to allow for common door hinge designs across various armor kits. The EDS is a self-contained unit and does not require pneumatic, hydraulic or electrical power to be connected to the door like traditional Door Assist Systems.

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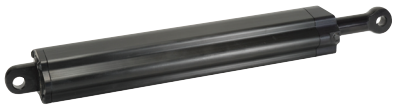
Damper System Value



Feature	Benefit	Customer Value
Consistent door speed at various closing forces	Regardless of door load or mechanics, door opens and closes in a safe and consistent manner	Safe door movement to prevent operator injury
Extend and retract speeds are independent and factory configurable	Open and close speeds are user defined and can be different	Allows for safe door movement but can have a faster close time to allow the door to latch quickly
Lock in any position, lock and unlock while loaded	Under any load and door movement, door can be locked and will remain locked at normal inclines and slopes	Allows operator to ergonomically and safely enter and exit the vehicle on inclines and slopes while keeping the heavy door open
Lock over-ride force, factory settable	If defined door forces are exceeded, damper will over ride and move at the defined speed rate	Prevents door and cab damage if large loads occur on the locked door
Wide temp range (-50°F to 170°F), robust design to withstand abuse and misuse by personnel	Functions across all vehicle performance parameters. Designed for the application	Safe door control regardless of application extremes
One part number for A-kit, B-kit and left hand and right hand doors	One product can be used for various levels of armor for both left and right hand doors	Reduced part number count, reduces BOM and acquisition costs
Equal area damper, no net extension or retraction force	Damper does not require additional gas pressure or accumulators due to retract and extend area differences. Damper needs very minimal force to move	High performance door with a reduction in door complexity and cost

Egress Damper System (EDS) Value

Feature	Benefit	Customer Value
Functions per non-EDS damper	Per above	Per above
Emergency door assist	Allows door to be powered open in an emergency situation	In a vehicle flipped condition, this will save lives
Pressure release feature	After emergency use, operator will need to perform a 2nd operation to vent damper pressure and allow the door to close	Allows doors to be closed after emergency event once vehicle has been deemed safe
Pin-pin dimensions same as Damper	Allows damper and EDS to be interchanged	One simple door design for multiple armor kits
Unintended operation device, operator must perform two actions to engage EDS	Prevents door being powered during normal use	Safety
Reuse prevention, once activated, EDS has visible indicator to show EDS has been engaged	Operator will see EDS has been activated and will need to replace before vehicle is operated	Safety

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