Lectrotab Advantage Over Hydraulic-Based Systems

Linear Devices Corporation (Lectrotab brand) was founded in 1997 to develop a line of electromechanical trim tab actuators that would overcome the numerous problems inherent to hydraulic-based systems. Many design features that resolved these problems are patented and exclusive to the Lectrotab product line.

Issue	Hydraulic-Based Systems	Lectrotab (Electromechanical System)
Cylinder O-ring Damage	Barnacle growth on ram cylinder damages sealing o-ring, causing oil leakage	Lectrotab actuators utilize a patented upper o-ring placement beyond the reach of barnacle growth, eliminating water seepage (U.S Patent# 5,881,666)
Oil Leakage (Hoses and Fittings)	Oil leaks from damaged hoses and corroded hydraulic fittings requiring constant refilling of oil reservoir	Electric actuators are potted, sealed, waterproof, and contain no hydraulic oil
Pushing Force	Hydraulic systems may use two or more cylinders to compensate for excessive water force during tab deployment	All Lectrotab actuators are tested to push a load force of 1000 lbs or more; so in many cases, one Lectrotab actuator can replace two hydraulic cylinders
Cylinder/Tab Damage while backing down	Spring in cylinder may be too weak to hold tab in place when backing down on boat, causing cylinder and tab to break	Internal friction brake prevents unwanted deployment when backing a boat down
Unwanted Tab Retraction while underway	Oil leakage causes tab to slowly retract while underway	Internal friction brake prevents unwanted retraction while underway; the stronger the water force on tab, the greater the braking effect
Failure of Feedback Sensor	Many hydraulic-based systems use feedback sensors to indicate tab position; sensors are subject to corrosion, leading to loss of adjustment or failure	Lectrotab systems utilize precision made gears, a ballscrew, and electronic braking circuit, which eliminates the dependency on a feedback sensor Tab position indicators are based on deployment and retraction time