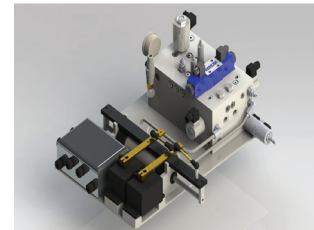
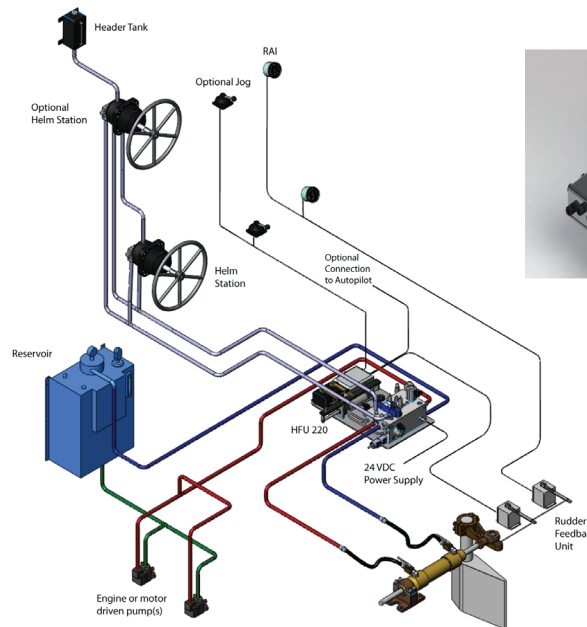


Luxury Dinner Cruise Ship on Lake George Suffered From an Unidentified Banging Noise Below Deck

Next year will mark the 200th Anniversary of the Lake George Steamboat company. In those 200 years the company has changed a lot, but one thing has not changed; the need to keep customers happy. As the premier tourist attraction in the region, customers have come to expect a thrilling cruise on the lake, excellent food at the buffet and the sense of luxury that comes with being aboard ship during the evening dinner cruises. The one thing the customer doesn't expect to hear is the clunking steering system on the largest and most luxurious ship, the *Lac Du Saint Sacrament*.

According to Rick Hathaway, Marine Specialist for The Hope Group, the owners of the *Lac Du Saint Sacrament* sought a solution to a harsh banging sound that occurred when the ship was underway. The noise was hardly complimentary to the luxury effect the ship's owners were trying to create for their guests. Another aspect of the banging sound was an issue of cylinder creep which was adversely affecting the ship's steering.

Upon inspection it was determined by the specialists from The Hope Group that the Hydraulic Follow-up unit had a closed center valve and was not a soft shift valve, which was responsible for the banging sound. It was recommended that the unit be replaced with a Jastram HFU-220



Power Supply	24 VDC, 6 Amps
Flow Rate	6 GPM (Max)
Working Pressure	1000 PSI
Steering Mode	FFU, NFU

Jastram Hydraulic Follow-up Unit HFU-220

The Jastram HFU-220 is a stand-alone unit, small and compact, capable of handling one or multiple help pumps stations, with optional jog lever for electric controls, and automatically reverts to manual steering in case of electric power failure.

Hydraulic Follow-up unit, which would provide the power steering and manual emergency steering. According to Rick, this is the normal method of steering and involves feedback of steering angle to the helm. This is suited to both manual and automatic operation.

Rick said, "Typically, the power steering gear is operated by a motor pump assembly or engine driven pump. The manual steering gear is operated by a helm pump," he added. "When the control power is disconnected, the two change-over

solenoid valves in the power steering manifold de-energize and the system switches to manual automatically," said Rick. The new unit offers the soft shift and open center valve to reduce the nose and drift. It was felt the customers would appreciate the improvement.

