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## Benefits of the Evolution Marine Shaft System (EMSS)

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1. Transfers propeller thrust to the hull allowing for truly soft mounting of the engine. This will isolate the engine greatly reducing engine vibration to the hull and associated noise levels throughout the vessel.
2. The internal connecting shaft with flexible joints and splined slip joint eliminates having to subsequently align the engine and shaft. Various fixed angles between the shaft and engine can be accommodated. Engines can be lower without shaft angles dictating engine angles.
3. The oil-lubricated section sealed to the hull, as with any through-hull fitting, will eliminate water from entering a hull along the shaft line.
4. The oil-lubricated section eliminates packing glands and cutless bearings and all of their inherent problems of safety and maintenance.
5. By holding each end of the shaft with oil-lubricated, mechanical bearings with near-zero clearances, typical propeller slippage is greatly reduced. The propeller is more efficient, fostering increased speed and fuel savings.
6. In strut configurations, the non-turning shaft log tube of the **EMSS** eliminates the detrimental turbulence of water in front of the propeller caused by a turning shaft. This also increases the efficiency of the propellers.
7. The drag on the shaft from packing glands and cutless bearings is eliminated with use of oil-lubricated bearings.
8. The strength of strut configurations is greatly enhanced by the triangular attachment of the **EMSS** to the hull and the tensile and yield strength of the shaft log tube. There are three fixed points: where the shaft log tube exits the hull; where the shaft log tube passes through the strut barrel; the attachment of the strut to the bottom of the hull.
9. The **EMSS** is built with two oil-lubricated chambers for operational safety. It also has a monitor tank with sight glass and air pressure gauge.
10. The **EMSS** allows for greater safety. In a strut configuration, the **EMSS** eliminates the possibility of rope becoming entangled on the shafts between the hull and the strut.
11. The **EMSS** is oil-lubricated for long-term operation with low maintenance of changing the oil once per year and greasing the universal joints on the internal connecting shaft once every 500 hours.
12. The propeller vibration to the hull is greatly reduced.



**The Evolution Marine Shaft System (EMSS) is a long-running, low-maintenance, oil-lubricated shaft system that significantly improves speed, propeller efficiency, and fuel economy, while reducing hull vibration and associated noise levels.**