SIMPLICITY MARINE DRIVES

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Installation Guidelines

Positioning Of Simplicity Drive on the Transom

The correct position of the drive unit on the transom is detailed in the transom template drawings included with each drive unit. The distance from the hull bottom to the stern tube center (X Mark) is shown on the template drawings for each of the Simplicity models. It is critical for best performance that this vertical positioning is correct. Simplicity Marine Drives are supplied to match the transom angle of the boat. It is very important that the angle provided by the owner or installer is correct. The drive shaft angle should be 5 to 8 degrees, to the static water line as specified in the template drawings. The rudder shaft will be perpendicular to the water line.

A final check of the drive unit position can be achieved by running a straight edge along the hull bottom at the drive unit centerline. Extend the straight edge to the end of the bearing tube. The point where the straight edge meets the drive unit should be at the bottom rear edge of the bearing tube. This will ensure proper water flow to the propeller. If the unit is either too high or too low is should be repositioned to the correct height.
The propeller shaft angle should be at 8 degrees to the hull bottom at the transom. (NOTE: There will be some instances were the hull design or application requires that the drive be positioned higher or lower, or a different angle variance may be necessary. Simplicity Marine Drives will advise if this is required.)

Attaching The Simplicity Drive Unit To The Transom

After the Template drawing has been taped to the transom and all the mounting and exhaust holes have been drilled, the unit is ready for final installation. A generous application of chucking compound (3M 5200 or Bostik 920 or any good underwater marine sealant) should be applied to the drive on the out side edge of the gasket.
The drive unit should be torqued evenly using the Stainless Steel bolts provided with the drive.

Gearbox Coupling and Driveshaft Alignment

Engine and gearbox installation is the builder's or owner's choice. Whatever installation method is used, it is important to ensure accurate alignment of the Simplicity drive and the gearbox drive flange. The propeller shaft is usually directly coupled to the gearbox, transferring the propeller thrust though the transmission bearings to the engine mounts and hull stringers. By changing the propeller shaft length the engine and marine gear can be positioned further forward for optimal balance and trim. Whichever method is used, exact alignment of the entire drive train produces the best results.

For engines on flexible mounts, only top quality mounting pads should be used to prevent the engine moving forward from thrust and side torque causing misalignment of the drive train. This is particularly important in close-couple situations. High quality flexible couplings can be used to lessen misalignment and vibrations.

Universal and Constant Velocity Joints

Simplicity Marine Drives does not recommend that the use of universal and constant velocity (CV) joints. However, on some applications it is needed to get proper alignment of the engine gearbox and propeller shaft. In these situations, only top quality universals and CV joints should be used.

It is essential that a thrust bearing unit be installed between the propeller and first universal or CV joint to prevent the propeller thrust from damaging the universal.

Sacrificial Anodes and Electrolysis Prevention

Simplicity Marine Drives are supplied with zinc anodes. The drive unit should be properly grounded to the vessel. Adequate and appropriate electrolysis protection is the responsibility of the boat builder or drive installer. On Aluminum or Steel vessels, extra attention should be given to insulation of the drive and electrolysis protection. Simplicity Marine Drives cannot accept any responsibility for any galvanic corrosion.