DESCRIPTION

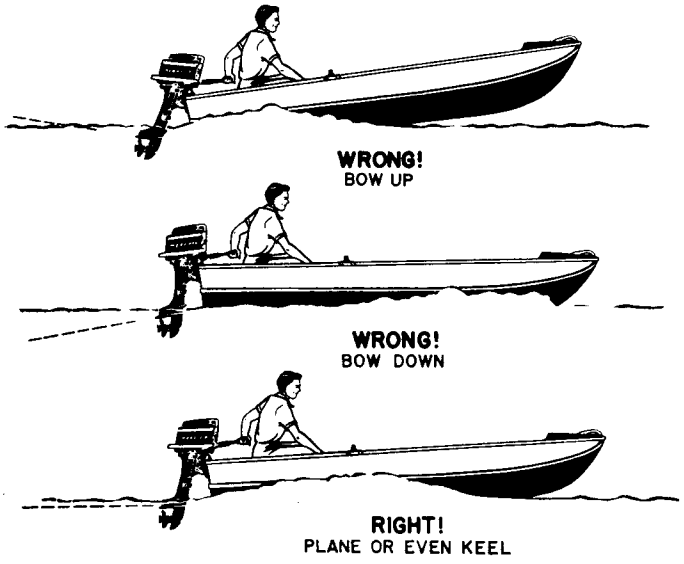
Following are some enlightening facts on boat performance for dealers and customers. Many times the motor itself is blamed for inefficient operation when actually it's the boat or installation of the motor on the boat. If these facts are complied with and practiced, it will result in fewer complaints of poor performance and operating conditions.

BOAT PERFORMANCE

Boat Speed: Consult Boat House Bulletins for similar boat size and loading. These boats and motors are run with the best-suited propellers and with the optimum setup (transom height and tilt angle, usually with aft position of center of gravity).

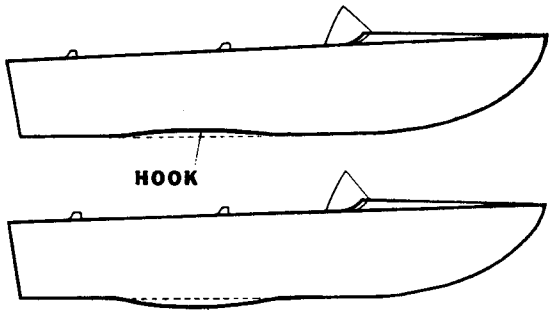
Effect of Center of Gravity Location: For maximum speed, move weight aft until boat porpoises or is about to porpoise. This reduces wetted surface to a minumum, only the rear half of the boat bottom being wet.

Effect of Tilt Angle: The tilt angle should be set so that cavitation is about parallel to bottom of boat. Speed of boats, having center of gravity located forward, may sometimes be improved by tilting engine out one pin hole. (See figure, below.) This will tend to raise bow and reduce wetted surface. If engine is tilted in, the boat will ride with the bow down, wetting more of the bottom and reducing speed. This will generally improve operation in rough water.



Effect of Transom Height: A greater transom height will increase boat speed but makes cavitation more likely. The effect of transom height on speed is slight at low speeds (15-20 MPH) but important at higher speeds (30-35 MPH and above).

Effect of Boat Bottom Condition: For maximum speed, a boat bottom should be nearly a flat plane where it contacts the water. It should be especially straight and smooth in the fore and aft direction. *Hook:* The bottom is said to have a "hook" if it is concave in the fore and aft direction when viewed from below. When the boat is planing, this causes more lift on the bottom near the transom and allows the bow to drop. This greatly increases the wetted surface and reduces boat speed. A hook is frequently caused by supporting the boat too far forward to the transom while hauling on a trailer or during storage. *Rocker:* A "rocker" is the reverse of a "hook" and much less common. The boat has a rocker if the bottom is convex in the fore and aft direction when viewed from below. A boat with a rocker has a strong tendency to porpoise. *Surface Roughness:* Moss, barnacles or other surface irregularities that increase skin friction of the boat bottom will cause considerable loss of boat speed.



"Hook" and "Rocker"

Effect of Gear Case Exterior: Surface roughness of the gear case, caused by barnacles or corrosion, can easily cause a speed loss of 1 or 2 MPH on boats in the 30 to 35 MPH and higher class.

PROPELLER SELECTION

Propeller selection can best be made if approximate boat speed is known or can be estimated. A propeller should allow the engine to turn at the maximum recommended RPM at the highest speed the boat will travel.

For light, fast boats, use the higher values. For cruisers - - where the engine will operate for longer periods near full throttle - - use the lower values. (See Propeller Recommendation Chart, Section III.)

QUICKSILVER PROPELLER PROTECTION

Flo-Torq Propeller Drive, exclusive with Kiekhaefer Mercury Outboard Motors, means safe, sure propeller protection that adds to Mercury's reputation for getting you there -- and back! Compressed live rubber bushing cushions normal loads . . . slips on impact to guard propeller . . . eliminates the necessity for shear pins. Flo-Torq Propeller Drive is an important safety feature . . . the first unbonded rubber bushing propeller drive!

FUEL CONSUMPTION, MILES PER GALLON

For a planing boat the maximum miles/gallon is obtained with an engine that will just plane the boat (15/17 MPH) at full throttle. Larger engines or dual engines, that will drive the boat faster, will give less miles/gallon (same as with automobiles).

A given boat and motor usually will get the most miles/gallon at or near full throttle. Improper carburetor setting can reduce the miles/gallon by 10 or 15 percent.