RIGGING RECOMMENDATIONS FOR SHALLOW DRAFT ‘‘FLATS” BOATS

DEFINITION OF SHALLOW DRAFT ‘‘FLATS” BOAT

Any boat designed and used for shallow water operation, with the outboard running in an elevated operating mode. Bass boats, ‘‘Texas” style scooter hulls, and jon boats may also benefit from the information listed in this bulletin.

BOTTOM DESIGNS

Bottom designs are usually shallow deadrise, modified ‘‘V” hulls with air tunnels, propeller pockets, step transoms, etc. to allow higher than normal engine heights.

COOLING WATER FLOW AND PRESSURE

From an engine manufacturer’s view, maintaining adequate cooling water flow and pressure to the outboard is the major concern. All outboards require a minimum flow pressure to adequately cool the powerhead at various RPM ranges. Sand, mud, and/ or weeds may also limit the water flow to the outboard. Caution to the owner/ operator to monitor water pressure and overheat gauges/ horns will minimize possible engine damage from these elements.

PROPER RIGGING

Proper rigging is a major concern. The elevated outboard places additional stress on hulls and rigging components. These stresses must be considered when designing transoms and rigging the outboard.

PROPELLER SELECTION

Propeller selection is important. The nature of the ‘‘flats” boat requires an immediate hole shot to plane, and also requires a propeller that will hold while running in a water surfacing condition while underway. A lower pitch propeller will give the hole shot, but may allow the outboard to operate outside of the peak RPM range while underway. When propping the boat/ motor combination, a tachometer is necessary to determine correct operating RPM. A propeller with good weed shedding ability is necessary, as is a propeller that can withstand impact. The nature of use of this type of boat will almost guarantee striking bottom on occasion, making a stainless steel propeller a must item.

PROPELLER SELECTION/ MAINTAINENCE

The Quicksilver Hi-Five five blade propellers will give an excellent hole shot, and run well at an elevated transom height. The Quicksilver Laser II series propellers will allow more top end speed, but with some sacrifice on hole shot. Test and evaluation will determine the right propeller for each specific boat and operating condition. **IMPORTANT: The nature of use of the flats boats may result in striking bottom or other flotsam that may damage propellers. Proper instruction to the boat owner/ operator to check and maintain the propeller will help insure boat performance and engine life.**

WATER PRESSURE

Listed here are minimum water pressures required at 5000 RPM or above for most outboards commonly used in these applications. CHECK YOUR ENGINE BRAND AND MODEL FOR REQUIRED WATER PRESSURE

Model	Min. Water Pressure PSI (kPa)
75-90	10 (70)
100-115	10 (70)
135-200	12 (80)

ENGINE MOUNTING HEIGHTS

Two items are most important in determining outboard mounting height:
(1) Maintenance of water pressure
(2) Maintenance of peak outboard RPM (via mounting height and propeller choice)
The peak operating RPM of the outboard is listed in the Operator’s Manual (Owner’s Manual) shipped with each outboard motor.
IMPORTANT: Refer to the water pressure chart when propping/ testing the boat.