MINNOW SAILING DINGHY - FITTING OUT GUIDE

General:

When fixing fittings to the hull, 3.5mm stainless steel nuts and bolts should be used wherever maximum strength is required, eg. rudder fittings. Where bolts cannot be used, 8 gauge stainless steel self tapping screws are best, usually the flat headed variety. The length should be selected according to the thickness of the timber and the amount of strain on the screw. Where the pull may be direct, and therefore likely to pull the screw out, such as fastening toe straps onto floor strengtheners 25 mm screws would be best, providing they don't go through the timber. Where the pull is across the screw, shorter ones will do eg. the chain plates can use 20mm screws. Always drill a hole for the full length of the screw (without going through the timber); use a finer drill for soft timber and a thicker drill for hardwood. If the screw is difficult to put in, try a slightly larger hole.

When attaching fittings to the aluminium section of mast and boom, use either stainless steel self tapping screws or 4.5mm aluminium pop rivets (3mm rivets are not strong enough for mast fittings). The scaled type of pop rivets are better than the hollow ones, which need caulking to seal the mast. Do not use brass with aluminium section, as the aluminium will quickly corrode.

HULL

Bow Chain Plate: Screw to nose block with top of ferruled end approx. 3Omm above deck level. Attach the 25mm towing ring, through 15mm 'U' strap, at the top two holes of the chain plate. (2 x 25mm, 1 x 20mm self tapping screws)

Chain Plates 2: Pass through slot in deck and screw one plate each side. Have top of chain plate approx. 25mm above deck to give ample clearance for shackle pin. (6 x 2Omm self tapping screws)

Inspection Port: Fit with short countersunk self tapping screws. Smear with silicon rubber or caulking compound on contact faces before fitting.

Drain Hole Bungs: Fit in the aft end of side tanks. (4 x 15mm self tapping screws)

Rubber Shock Cord: This is a loop to hold the centre plate down or in a raised position as required. Small plastic deadeyes screwed onto each side of the centrecase top battens, approx. 100mm in front of the thwart will make the shock cord easier to use. To give the shock cord plenty of elasticity, fit enough to run each end down to another small deadeye on the bottom batten of the centre case.

Swing Straps. (Seat belt webbing) The easiest way to fit these is between the two floor strengthening blocks. (25mm screws with large washers or toe strap plates) If more height is required between floor and straps, fit overlong straps and tie them up and forward to the thwart using shock cord.

Rudder Assembly: Draw a light vertical line down the centre of the aft face of the transom. The pintles are bolted on, the top fitting with fixing holes 65mm from the top of the transom and the bottom fitting a further 155mm below this. (2 x 25mm bolts and nuts with washers)

The Gudgeons are fitted to the rudder box, the top fitting 50mm from the underside of the tiller and the lower fitting 150mm below this. Use 3.5mm bolts and nuts for the forward holes and 12mm screws for the aft holes. The tiller extension fitting is mounted 100mm from the forward end of the tiller, using 3.5mm bolts and nuts. The tiller extension anchor clip should be attached with small screws.

Rudder Blade: The 56mm bolt, washers and wing nut provide the pivot for the blade between the rudder cheeks.

Mainsheet Fittings: The most popular mainsheet location is centreboom, using a fixed pulley in the centre of the thwart, or a pulley on a rope or wire hawse. The rope hawse is the most common and passes through holes in the thwart approx. 150mm in from the tank sides. The maximum purchase allowable is 4:1. The final pulley is usually fitted to the floor block behind the centrecase or to the thwart strengthener, using a stainless steel deadeye or swivel shackle on base. This fitting may be bolted, with countersunk screw heads to underside, through the floor block and hull. Ensure the screw heads are well below the ply hull surface.

MAST

Gooseneck Base Plate: This must be located so that the centreline of the boom will be 407+/- 6mm above the base of the mast. It is fitted onto the web of the mast (the web forms the frong of the sail track). The sail track is cut away from below the level of the gooseneek base plate to a height no more than 152mm above the boom centreline. Fasten the fitting with stainless steel self tapping screws, with screws into nuts captive in the sail track or with pop rivets.

Mast Cleat: Screw to the forward side of the mast approximately 200mm from the base.

Boom Vang Saddle: Fit to the aft face of the mast, 25mm from the base,

Shroud Hanger: (All hangers may need shortening to suit the small mast/boom diameters.) Pop rivet one end of the hanger to a hole 2287 +/- 10mm above the base of the mast, on one side. Place the top end of one shroud, the top of the forestay and the top end of the other shroud onto the hanger and pop rivet it to a hole on the opposite side of the mast. A 4.5mm stainless steel bolt may be used as an alternative to pop rivets.

Halyard Pulley: Cut away a section of the sail track for approximately 40mm at the top of the mast and fit the pulley on the back of the sail track web, using pop rivets or 12mm self tapping screws.

BOOM

(All measurements are taken from the aft face of the mast sail track web.)

Gooseneck: These are made to fit 25mm wide tapered ends of the wooden booms. They must be widened to fit the round aluminium boom. Fit using stainless steel 12mm self tapping screws or pop rivets.

Boom Vang Hanger: The fastenings for this fitting (12mm self tapping stainless steel screws or pop rivets) should be located 560mm from the aft face of the sail track web.

Boom Vang Cleat: This must be fitted between the boom vang hanger and the mast (approx. 150mm in front of the boom vang hanger). Use 12mm stainless steel self tapping screws or pop rivets. This fitting may be omitted where a self cleating fitting is utilised for the 'vang.

Sail Outhaul Fitting: Cut away a section of the sail track for approximately 40mm from the end of the boom. Screw the fitting on the flat section of the web with 12mm self tapping stainless steel screws or pop rivets. Alternatively the outhaul sheet may be lead through an eyelet at the aft end of the boom and forward to a cleat on the underside of the boom. This cleat must be within 150mm of the aft end of the boom.

Sail Track: The boom sail track can be cut away at the mast end to make it easier to feed in the sail. The maximum length of the cutaway section is 152mm measured from the aft face of the mast sail track web.

Black Bands: A black band, approximately 12mm wide, must be painted on the mast and on the boom. These mark the maximum extent of the sail. Refer to the diagram for the location of these bands.)In the case of coloured masts the band must be a contrasting colour.)

Self Bailer: A self bailer is a popular extra and is normally fitted at the side of the centreplate case, a little in front of the floor strengthener. Fit far enough from the centre case so you do not cut into the fibreglass tape scaling the centre case.

Miscellaneous: It is allowable to add fittings to secure a bailing bottle and to tie a lanyard for securing the centreplate (which should be restrained from coming out of the centre case).

Shrouds and Forestay: These should be made of stainless steel and all can be of the same length ie. 2260mm from the bolt to the end of the thimble.