Fitting

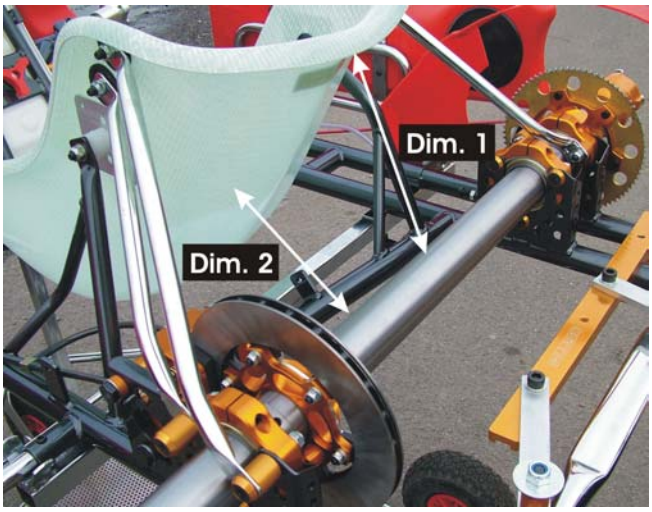
Instructions to help with accurate seat fitting

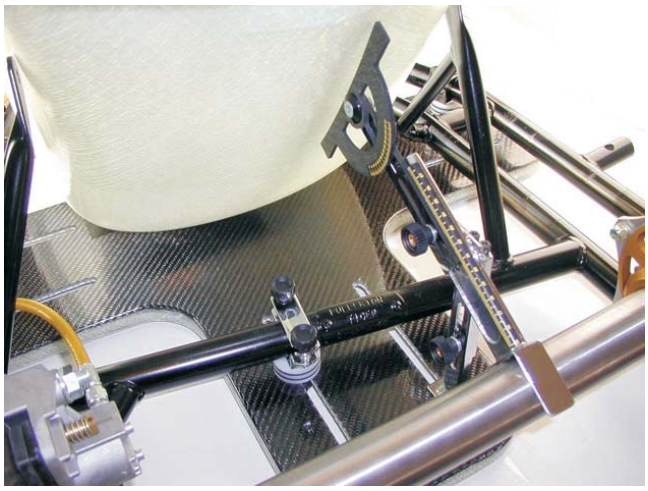
To accurately fit a kart seat place a flat sheet of plywood, or something similar, on your kart stand then space the chassis tubes from the wood with the correct ground clearance. 1.5 cm is the average distance that the seat base protrudes under the chassis tubes. 2 cm is possible but you risk eventually wearing through the bottom of the seat. Once it is placed on the wood, it is stable and easy to hold the ideal position. (Tip: A weight inside will help keep the seat upright.) At this stage be careful not to lay the seat too far back, this feels comfortable but is not always the best driving position. When using a seat of a different type to the one supplied with the kart, be extra careful with the seat position. It is important to make sure that the driver's back and therefore the majority of the weight in the kart, remains in the correct place. Please note that the T7, T8 and T9 shaped seats have a different front edge measurement to the T4, T5, T10, T11 or standard fibreglass seat dimensions. This 'front edge' measurement is taken from between the furthest forward edge of the seat and the front chassis tube, which is the place where a driver's heel would rest. This dimension will vary according to seat shape and size. Bolting a substantial amount of lead weight to the back of the seat can also make a difference to the seat position. It forces you to position the seat further forward to achieve the same balance. The most accurate way of measuring the actual position of the drivers back is to take a 90° line (approx.) from one side of the spine, which runs down the back of the seat, and measure the shortest distance to the axle. This dimension is currently an average of 18.5 cm. (See diagram Dim. 2) You must not use the spine as this varies in depth too much between each type of seat. Using this method should ensure that your new seat is fixed exactly in the same place as the old one. The average measurement between the surface of the axle and the top edge of the seat is 25 cm. (See drawing Dim. 1). With the flat bottomed seats you can use the flat to give you the correct seating angle. When you are confident of the positioning of your seat, **bend the rear seat stays so that the flat of the stay is parallel to the side of the seat**. Mark and drill these two holes. With a covered seat, try not to catch the foam rubber inside the cover. Use the larger of the two types of nylon washers provided between the moulding and the main side seat stays. Additional spacers may be used but they must be rigid spacers, not rubber. Tighten the two bolts. Mark and drill the front holes. Again, bend the flat of the stay so that it is parallel to the surface of the fibreglass. There will usually be a gap between the seat and the front stays. Therefore, if necessary use hard spacers to fill the gaps. Now tighten the front bolts and re-tighten the rear ones until very tight. Extra seat stays can now be fitted if necessary. Keep the head of the bolt away from the top edge of the seat. Fasteners that are fitted too near the top edge of the seat will bruise the ribs. When you are satisfied with the performance of the kart, record the position of your correctly fitted seat. The usual measurements to keep a record of are; from the front of the seat to the main chassis rail, where your heel would normally rest, and from the axle up to the top edge of the seat. (See diagram Dim. 1) Also measure the amount that the seat shows below the chassis tubes and keep this dimension. To prepare the seat for wet weather, drill two holes for water drainage at the lowest point of the seat. Your seat is now ready for use. Please remember to consider that your rain tyre may be of a different diameter to the dry; therefore check that when they are fitted there is sufficient ground clearance.

VERY IMPORTANT When bolting through a cover, re-tighten the seat bolts after the first few laps. Initial testing results will be affected if the bolts have not fully compressed the material and foam.

Cleaning covered seats

Any normal carpet or upholstery cleaner can be used. For oil, grease and tyre rubber stains, the cover can be cleaned with paint thinner. Apply to a cloth and wipe the mark off.





T BOARD SEAT FITTING JIG

Seat fitting is without doubt the most time consuming jobs on the kart. Accurately positioning a seat (which if 5 mm out, will be detectable in the lap times) is difficult when you take into account the varying shapes, sizes and driver seating preferences. The **T Board Seat Fitting Jig** gives an accurate way of understanding where your seat is positioned in relation to the rear axle. The measurement point used on the rear of the seat allows different seating angles to be used, while keeping the centre of gravity in a similar position. Deliberately measuring to one side of the spine recess, takes into account differing spine depths in the many varied types of seats. The seat position can be set, the three necessary dimensions recorded and then transferred into any other chassis as a starting point. Using the T Board, it is now possible to understand the optimum seat position of each type of kart, whilst also enabling you to easily mark and drill the seat fixing holes with greater accuracy.

Fitting using the "T" Board

Determine how much of your seat hangs under the chassis tubes. The average is 15 mm. Use the 4 and 2 mm spacers to give the correct distance. Put the clamps into the T Board slots. Adjust the clamps and fix to the chassis. The seat is now held in position by the board and it cannot be accidentally set too low.

Using the Measuring device

Fix the measuring device into one of the back slots, while allowing the lower sliding rule to find it's natural height between the T Board and the Axle. Tighten the knob that sets the lower rule. Set the Measuring device at 90 degrees to the axle. Extend the upper rule forward and upward to get the correct dimension to the back of the seat. The average of all 100 cc karts and a good place to start is 18.5 cm. Then set the angle using the protractor. Three dimensions should now be taken. The distance showing below the chassis tubes, the angle of the seat and the axle to seat dimension. With these three dimensions you can put any seat in any kart and the driver will always be exactly in the same position in relation to the rear axle.