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Your Delta Buggy has a unique serial number, which can be found on a silver label on the rear axle – please quote this number when contacting Delichon about your buggy.

 If a Delta is to be disposed of all components and materials must be recycled or disposed of correctly, in accordance with national regulations.

# **DELTA BUGGY**

## **INSTRUCTION MANUAL**



**PLEASE READ THIS BEFORE USING YOUR DELTA  
BUGGY AND KEEP IN A SAFE PLACE FOR FUTURE  
REFERENCE**



## **IMPORTANT SAFETY NOTES**



- ◆ **ALWAYS DEPLOY THE ANTI-TIPPER AND THE BRAKES WHEN PARKED AND BEFORE TRANSFERRING IN OR OUT OF THE BUGGY.** The Delta buggy is designed to be easy to tip backwards for improved manoeuvrability and easier handling. **NB. THE ANTI-TIPPER WILL NOT BE AS EFFECTIVE ON SOFT GROUND LIKE SAND.**
- ◆ **DO NOT HANG ANY LUGGAGE ON THE HANDLE OR BACKREST FRAME.** This can cause the buggy to tip backwards.
- ◆ **WHEN ASSEMBLING THE BUGGY CHECK THAT QUICK RELEASE WHEELS ARE SECURELY ATTACHED.**
- ◆ **READ THE INSTRUCTIONS BEFORE USE; PAY PARTICULAR ATTENTION TO ITEMS WITH THE WARNING TRIANGLE.**
- ◆ **ALWAYS HOLD ON TO THE BUGGY IN USE. TAKE EXTRA CARE ON INCLINES.** A wrist strap is provided for extra security.
- ◆ **ALWAYS USE THE LAP BELT TO KEEP THE OCCUPANT SAFE.** The shoulder and groin straps of the harness can be removed if not required.
- ◆ **WHEN OPERATING THE PARK BRAKES CHECK THAT THEY ARE WORKING EFFECTIVELY AND DEPLOY THE ANTI-TIPPER BEFORE RELEASING THE BUGGY.**
- ⊘ **RISK OF FIRE DUE TO POTENTIAL FLAMMABILITY OF UPHOLSTERED COMPONENTS. KEEP AWAY FROM NAKED FLAMES AND REFRAIN FROM SMOKING.**
- ◆ **Do not allow the occupant to climb into the buggy unassisted.**
- ◆ **Attempting to negotiate steps and stairs is dangerous, be sure that you and your helper can support the weight of the buggy and occupant. Do not attempt more than a short run of steps without at least two carers.**
- ◆ **The handle mounting is flexible to reduce hand/wrist fatigue. Do not lift the buggy by the handle when occupied; use the frame or section of tube between the handle adjusters and frame.**

Remove the adjustable (pronged) part of the buckles from the straps and the bungee cords from the hammock before washing.



## To remove the seat hammock for washing or replacement;

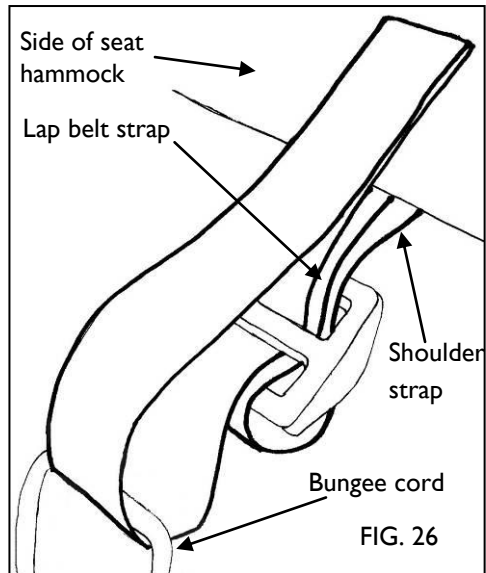
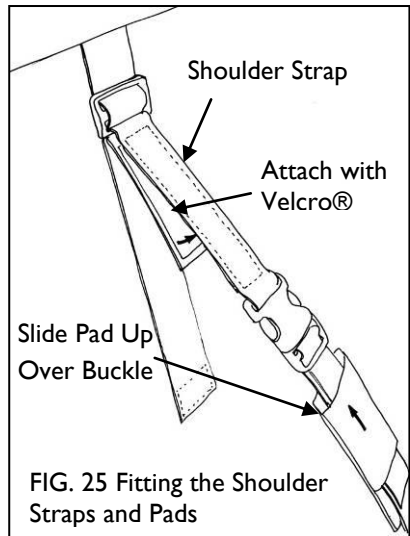
Look carefully at how the seat is attached to the frame before and during removal to make replacing it easier, in particular, take note of how the straps and the bungee cords are threaded.

The top of the fabric seat fits over the frame, most of the occupants weight is supported through this section. The sides and front of the fabric seat are attached to the frame by poppers, the number of these varies with the size of the frame.

Between the front corners of the seat there is a 40mm wide webbing strap which must pass around the frame and fasten tightly underneath.

The lap belt and shoulder straps are threaded through a three bar buckle on the back corner of the seat (see fig. 26).

The rear corners are held in place with bungee cords which pass through the webbing loops on the seat and hook onto slots in the frame brackets. The slots are in the axle adjuster plate on the medium Delta and on the rear frame bracket of the large Delta (see fig. 27)





## **IMPORTANT SAFETY NOTES**



- ◆ **FOLLOW THE PRE-USE SAFETY CHECKS BEFORE USE, REFER TO THE CARE AND MAINTENANCE INSTRUCTIONS.**
- ◆ **If any part is damaged or fails to operate correctly do not continue to use the buggy. Read the care and maintenance instructions and contact Delichon for advice if necessary.**
- ◆ **Take care when the rear wheels are removed to avoid damage to the brake mechanisms; use the protective discs provided.**
- ◆ **Never leave the occupant unattended in the buggy.**
- ◆ **Do not overload the buggy with additional children or luggage. See dimension and limits table on page 6.**
- ◆ **Do not allow children to play with or climb on the buggy.**
- ◆ **No adaptations or modifications must be made to the buggy without approval from the manufacturer.**
- ◆ **Do not place heavy objects on top of the frame when it is being stored or transported.**
- ◆ **Keep your buggy clean and in good condition for optimum performance – see maintenance instructions.**
  
- ◆ **THE DELTA BUGGY IS NOT SUITABLE FOR TRANSPORTING THE OCCUPANT IN A MOTOR VEHICLE.**

## Description

The Delta Buggy is designed to enable access to areas where most wheelchairs would be unsuitable; countryside paths for example.

The fabric seat of the Delta is designed to provide comfort and support to the user; it is not however intended as a primary seating system but for occasional use.

When in the buggy the occupant should be supervised at all times by a carer.

All attendants/carers should be familiar with the user instructions before use.

A lap belt and shoulder straps are provided, the lap belt should be used at all times for safety. Foot straps and a groin pad may also be provided.

The rear wheels have drum brakes operated by hand levers on the push handle, these act to slow down the buggy or stop it from rolling back on a hill. The brake levers are fitted with a lock that allows brakes to be used for parking by keeping them on when the carer lets go of the handle.

The design allows easy and compact folding and quick release removal of the wheels for transit (see fig. 2); discs are provided to protect the brakes when the wheels are removed. The medium & large frames are available with two sizes of fabric seat which are interchangeable.

The centre of gravity of the buggy and occupant is close to the rear axle to make tipping back for steering and negotiating obstacles easier. The axle position can be adjusted to fine tune the balance for the individual user. A foot-operated stabiliser, **which must be deployed when parked**, is mounted on the rear of the frame to prevent tipping.

A luggage carrier under the seat is provided. Do not hang luggage on the handle.

Properly cared for and maintained the Delta Buggy is designed to last for a minimum for 5 years under normal usage conditions.

## Accessories

A transport bag is available as an extra, to help to protect the buggy during storage or transit. A wedge shaped seat cushion is available to reduce hip flexion and raise the occupant in the seat. Rain covers are available for the small , medium & large Delta Buggy and must be used in conjunction with a sun-hood. Sun-hoods are available for all sizes. Double width rear wheels are available to make pushing the buggy easier on soft ground. Foam headrest, seat extender, pommel and positioning rolls are also available.

Fig. 23

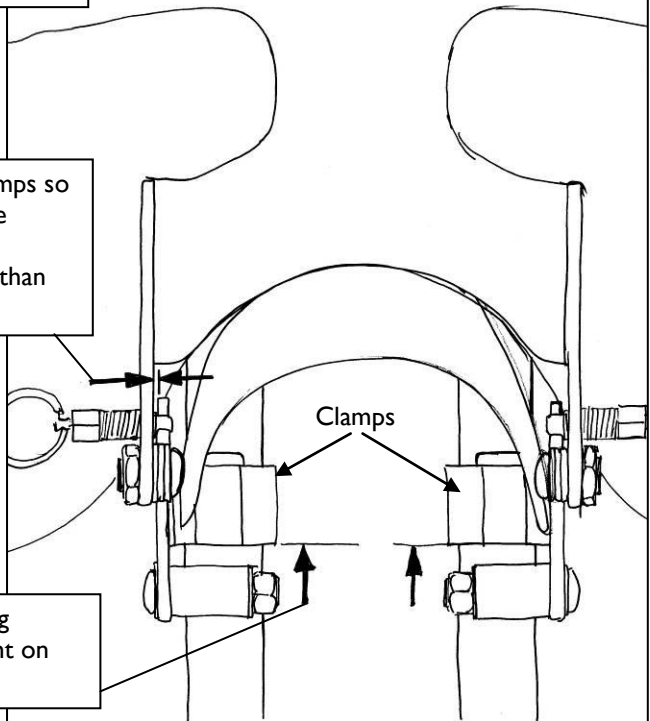
**NOTE :** Footrest mounting clamps must be on the straight part of the forks below the bend!

Footrest in folded position

Adjust the mounting clamps so that the gap between the footrest hooks and the footrest brackets is less than 1mm

Clamps

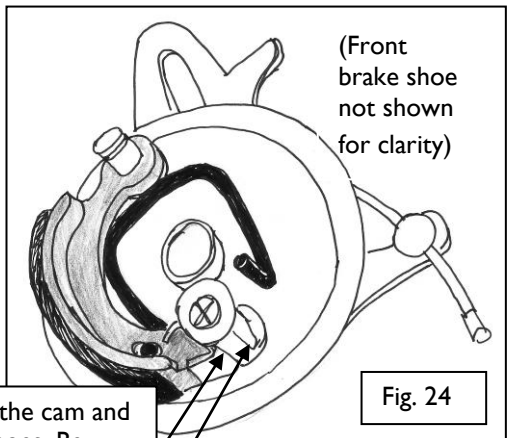
Ensure that the mounting clamps are at equal height on the frame



(Front brake shoe not shown for clarity)

Fig. 24

Apply grease between the cam and the end of the brake shoes. Be careful not to get grease on the brake pads of the brake drum.





## Regular Checks

The Delta buggy should be inspected by a competent person every 6 months for adjustment and wear. The following items should be checked:

- ◆ Park brake adjustment, brake cable and brake pad wear or damage.
- ◆ Anti-tipper function and secure locking into place; when deployed the end of anti-tipper should be approx. 22mm from the ground.
- ◆ Security of the quick release wheel attachments.
- ◆ Wear to folding joints. If there is excessive movement in the joints, take out a stainless steel screw to inspect the polymer bearing that protects the aluminium joint from the fixing screw. The bearings can be replaced if necessary.
- ◆ Wear to the handle adjusters clutch mechanism. When the handle does not lock securely the adjusters should be replaced.
- ◆ That all screws and fixings are secure; folding joint fixings should not be over tightened.
- ◆ Condition and secure attachment of the foam that covers the handle to backrest frame joint.
- ◆ Tyre wear and inflation pressure.
- ◆ Secure attachment of footrest; adjust height if required.
- ◆ Check condition of harness and foot-straps; replace if necessary.

Spares are available from Delichon and are supplied with fitting instructions.



**If any part is damaged, loose or not working correctly do not continue to use the buggy until rectified.**

## Troubleshooting

Problem - Delta buggy won't unfold.

Action - Make sure that you unfold the handle first.

Problem - The wheels are stuck and cannot be removed for folding.

Action - Check that the park brakes are released.

Problem - The footrest falls off.

Action - Adjust the footrest hooks so that they are at equal height and the gap between them and the footrest is 1mm or less (see fig. 23)

Problem - The brakes are sticking on when the brake lever is released.

Action - Lubricate the brake mechanism with grease (see fig. 24).



FIG. 1 – MEDIUM DELTA BUGGY



FIG. 2 – FOLDED DELTA BUGGY

**Dimensions and Limits**

SMALL DELTA			
Approx. dimensions in mm	Length	Width	Height
Overall dimensions	1080 - 1280	570	930 - 1040
Overall folded dimensions	850	540	300
Maximum occupant weight		40kg	
Maximum occupant height		1.12m	
Maximum luggage weight		6kg	
Seat to footrest height		240 - 360	
Push handle height		665 - 1040	
Rear wheel diameter		305	
Front wheel diameter		305	
Buggy weight		13kg	

**NOTE:** the fabric seat dimensions change when someone sits in it; a larger range of occupants can be comfortably accommodated than is suggested by the seat width and depth measurements.

<b>MEDIUM DELTA FRAME</b>			
Approx. dimensions in mm	Length	Width	Height
Overall dimensions	1110-1270	635	1050-1110
Overall folded dimensions	850-915	570	255
	<b>M1</b>		<b>M2</b>
Maximum occupant weight	50kg		50kg
Maximum occupant height	1.5m		1.5m
Maximum luggage weight	10kg		10kg
Seat to footrest height	240-390		275- 420
Push handle height	820-1060		820-1060
Rear wheel diameter	395		395
Front wheel diameter	305		305
Buggy weight	14kg		14kg

<b>LARGE DELTA FRAME</b>			
Approx. dimensions in mm	Length	Width	Height
Overall dimensions	1390-1430	695	1170
Overall folded dimensions	980-1070	630	275
	<b>L1</b>		<b>L2</b>
Maximum occupant weight	60kg		70kg
Maximum occupant height	1.65m		1.8m
Maximum luggage weight	10kg		10kg
Seat to footrest height	320 - 520		320 - 520
Push handle height	880-1100		880 - 1100
Rear wheel diameter	395		395
Front wheel diameter	305		305
Buggy weight	14kg		14kg

<b>EXTRA LARGE DELTA</b>			
Approx. dimensions in mm	Length	Width	Height
Overall dimensions	1530-1610	695	1220
Overall folded dimensions	1105-1195	630	275
	<b>XL</b>		
Maximum occupant weight		90kg	
Maximum occupant height		1.95m	
Maximum luggage weight		10kg	
Seat to footrest height		340-560	
Push handle height		880-1100	
Rear wheel diameter		395	
Front wheel diameter		305	
Buggy weight		16kg	

# Care & Maintenance Instructions

## Cleaning

The fabric seat, the harness pads, the luggage carrier, the transport bag, the sun-hood and storm-cover are constructed mainly of waterproofed fabrics that can be sponged with warm soapy water, brushed with a soft brush and/or hosed down. Rinse off any soap with clean water.

The fabric seat, the harness pads, the luggage carrier and the transport bag can be machine-washed at 30°C to 40°C – remove the parts of the buckles that are not stitched on first and contain the pads in a mesh laundry bag. **DO NOT IRON OR TUMBLE DRY.**

The frame, wheels and footrest can be cleaned by sponging with warm soapy water, brushing with a soft brush and/or hosing down. Rise with clean water and remove the rear wheels to allow the brakes to dry.

If the buggy should be exposed to salt water wash off as soon as possible with fresh water to reduce corrosion.

Protecting the metal parts of the brake mechanism with a water repellent agent such as Duck Oil® is advised to prolong their life and aid cleaning **but** avoid getting this on the brake pads or drums.

## Tyres

Standard tyres should be inflated to between 20 and 30p.s.i. (1.4 and 2 bar). Beach wheel tyres should be inflated to between 10 and 15 p.s.i. (0.7 and 1 bar approx). A car foot pump or bicycle pump with the correct adaptor (similar size to mountain bike) can be used. A puncture protection material such as 'Green Slime®', available from most cycle shops, can be used. Spare tyres and inner tubes can be purchased from cycle shops or Delichon Limited. Puncture resistant tyres are available from Delichon Ltd.

## Adjusting the Brakes

As the brake pads wear, adjustment will be necessary. To adjust the brakes release the lock nut on the park brake adjuster (see fig. 22) and screw the adjuster out slightly, re-check the brakes and adjust further if needed. When satisfactory park brake function has been attained tighten the lock nut.



Park Brake Adjuster

## Warranty

Your Delta Buggy is guaranteed for one year from delivery.

The warranty does not cover tyres, inner tubes, brake pads/shoes or damage caused by misuse or neglect.

Spare parts and advice are available from Delichon Limited. Moving parts subject to wear and most likely to need replacement are tyres, brake components, webbing straps and the handle adjuster mechanisms.



### Pre-use Safety Checks



BEFORE EACH USE CHECK THE FOLLOWING ITEMS

- ◆ That the wheels are securely attached (see pages 7 & 8)
- ◆ That the anti-tipper is operating correctly, and is deployed before transferring anyone into the seat.
- ◆ That the park brakes are working; try by pushing the buggy with the brakes on.
- ◆ That no parts appear broken or loose.
- ◆ That the tyres are inflated to the correct pressures. Low tyre pressure will cause instability and make pushing the buggy more difficult.

## Instructions for Use



See **Pre-Use Safety Checks Before Use (Pg. 18)**.

**To unfold the Delta Buggy;** place the folded frame on the ground with the handle uppermost, unclip the retaining strap. Put the wheels to one side.

Unfold the handle **first**, by pushing in the buttons on the inside of the handle hinge and rotating the handle upwards.



FIG. 3

Handle Adjuster Button

Lift the top of the backrest and push down the sliders on the side of the frame as far as they will go (see fig. 14). Clip the ends of the retaining strap together under the seat.

**To fit the rear wheels;** first check that the park brakes are not on. Take one wheel, push and hold down the button on the centre of the hub and insert the axle as far as it will go into the hole in the middle of the rear brake. Release the button.

**⚠️ PULL THE WHEEL TO CHECK THAT IS SECURELY ATTACHED.** Repeat with the other wheel.



FIG. 4

Wheel Release Button

**To fit the front wheel;** first check that the quick release lever on the front wheel axle is released (see fig. 5). Locate the ends of the axle into the front forks and lock the quick release lever.

**⚠ PULL THE WHEEL TO CHECK THAT IT IS SECURE.**

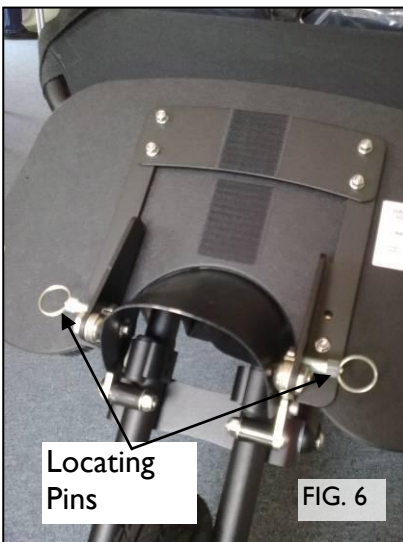


Quick Release  
Lever in Locked  
Position

**⚠ DEPLOY THE ANTI-TIPPER AND ENGAGE THE PARK BRAKES BEFORE PUTTING SOMEONE INTO THE BUGGY.**

**To deploy the anti-tipper;** push down gently with your foot on the stainless steel tube and flip it into the centre where it clicks into place; push down near to the bend in the tube not on the end.

**To fold down the footrest;** pull the two rings on the underside of the footplate to retract the spring loaded locating pins and fold down – the pins should release easily do not force them. Let go of the rings to lock the footrest in place.

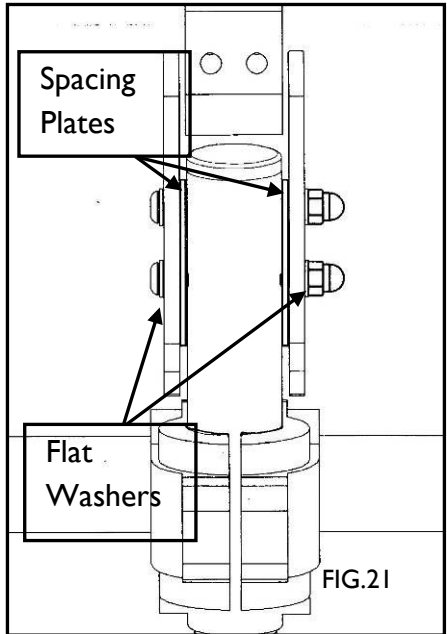
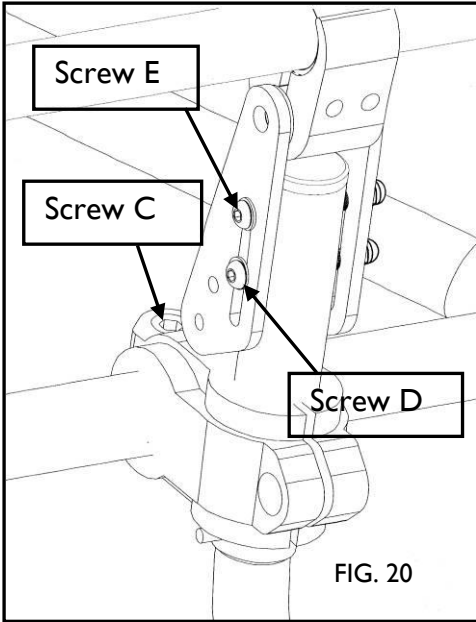


*The height of the footrest may need to be adjusted before use - see instructions below.*

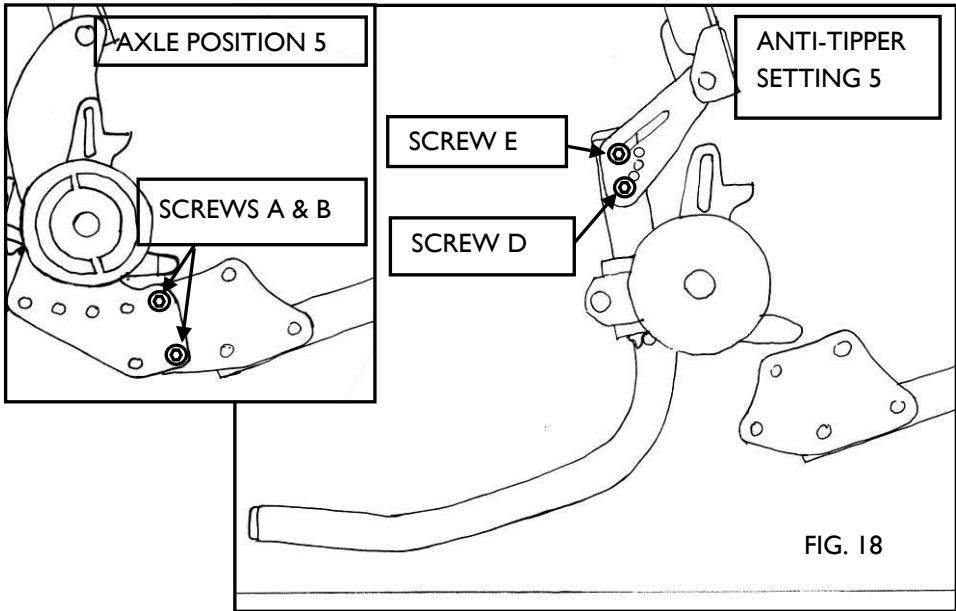
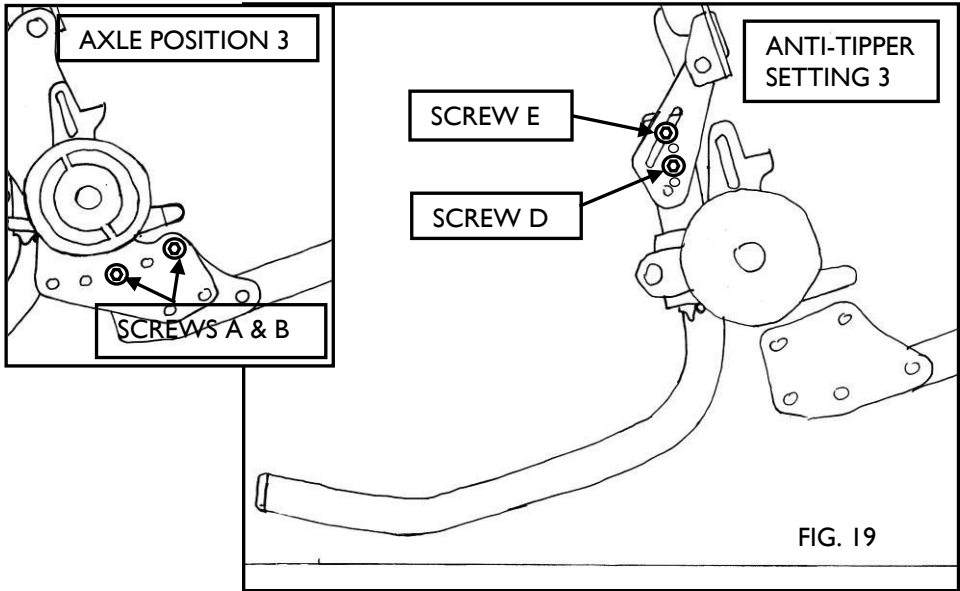
The footrest can be removed to make more space during transfer in or out of the buggy. To remove the footrest pull on the locating pins and fold the footrest up as far as it will go; keeping hold of the rings lift the footrest upwards parallel to the frame tube.

The foot-straps are designed to be long enough to remain under the loops on the footrest while positioning the foot.

**To adjust the anti-tipper position;** first; loosen screws C & E. Then remove screw D; be careful not to lose the washers. Rotate the anti-tipper assembly around the axle to position 1 - 5 to suit the axle setting. Line up the appropriate hole or slot in the adjuster plates and replace screw D; there should be spring washers between the plates and the tube and plain washers under the screw head and the nut (see diagram below). The end of the anti-tipper tube should be approximately 22mm from the floor when deployed on a level surface.







**To engage the park brakes;**  
pull the brake levers and engage  
the red latch into the last notch on  
the brake lever housing.  
**TO TEST THAT THE PARK-  
BRAKES ARE WORKING TRY  
PUSHING THE BUGGY; THE  
REAR WHEELS SHOULD BE  
LOCKED**

Park-Brake Latch

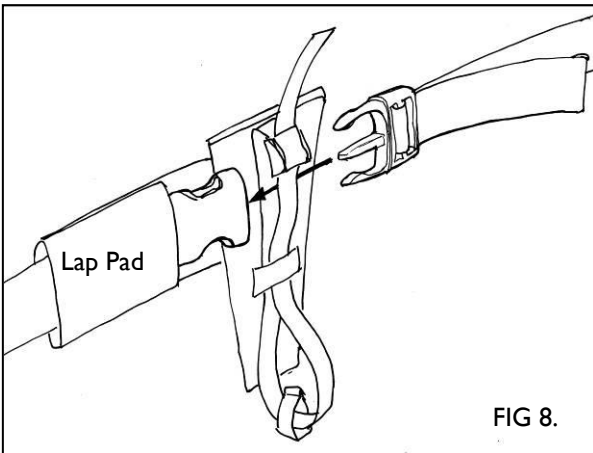


**Adjusting the Harness**

The harness is attached to two buckles at the back corners of the seat; the length of the two sides of the lap belt can be adjusted via these buckles. The lap belt is tightened by using the centre buckle on the lap pad. The lap belt should be used at all times to keep your child safely in the buggy.

The shoulder straps automatically adjust to the correct height when tightened by sliding up or down the backrest. The shoulder straps can be removed if not required by pulling the pad over the buckle and undoing the Velcro® fastening. The bottom part of the shoulder strap can be tucked out of the way under the seat.

The straps can be secured out of the way when transferring someone into and out of the seat by using the Velcro® on the ends of the straps and under the lap pad buckle to attach them to the side pads and the Velcro® patch on the right hand side of the cover (see fig. 14).



The groin strap is positioned by passing one end of the lap belt through the webbing loop on the front of the pad before fastening the lap belt. The groin strap is attached to the seat canvas the strap passing through the required loop on the canvas and securing with the buckle (see Figs 8 & 13).

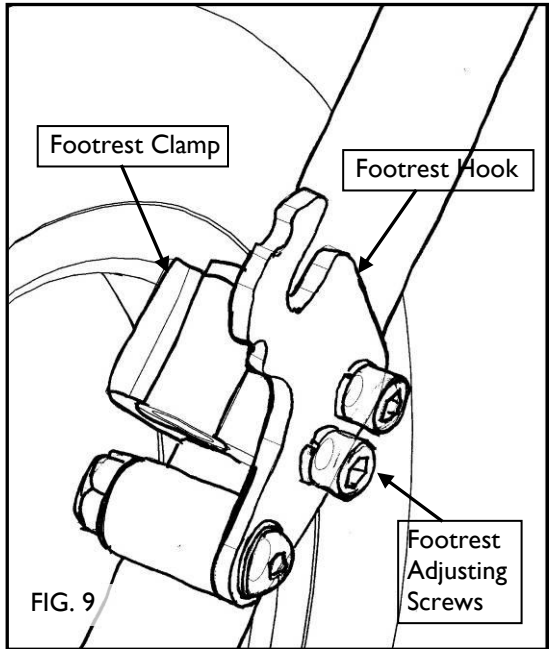
**To adjust the footrest height;**

first remove the footrest (see page 8). Loosen the footrest adjusting screws with a 5mm hexagon key (see fig. 9) and slide the footrest clamps up or down the frame tubes to the desired height.

Adjust the position of the clamps so that they are at equal heights and the footrest hooks are in line with the frame.

Tighten the screws and check that the footrest fits securely. There should be less than 1mm clearance between the brackets on the footrest and the footrest hooks (see fig.23 on page 21).

The foot-straps are designed to be long enough to remain under the loops on the footrest while positioning the foot.



**To attach the sun-hood; with the sun-hood folded,** fit the back of the hood over the top of the backrest. Carefully insert the ends of the wire frame into the holes in the handle bracket and push them in as far as they go. Hook the ends of the bungee cords onto the slot in the rear frame bracket.

Frame of hood fits into holes in handle bracket.

Attach bungee to slot in frame bracket.



### Fitting the Beach Wheels

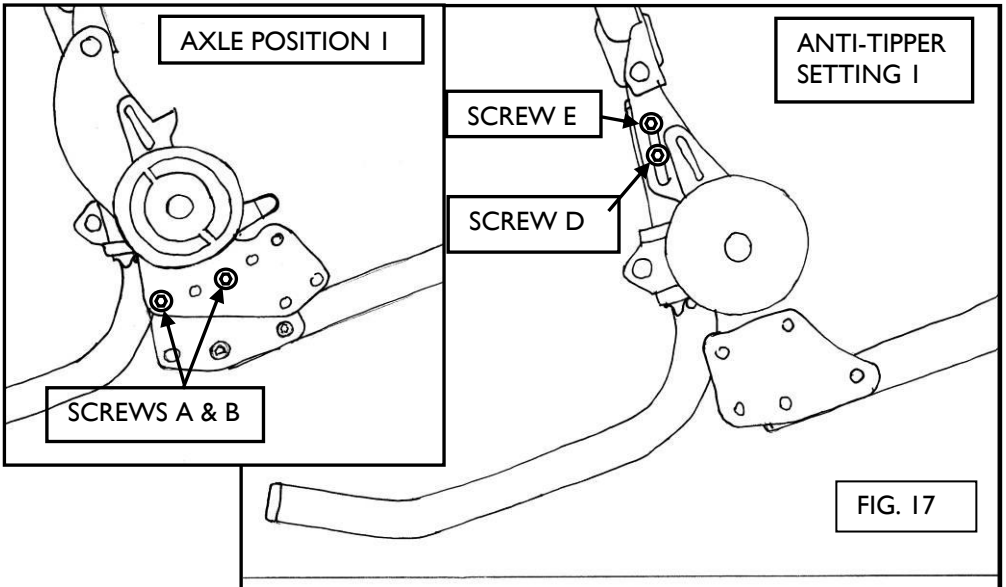
The beach wheels are attached to the buggy with quick release axles similar to the standard wheels (but longer). The release button is deeper below the outside of the hub.

Make sure that the axles are fully pushed down into the hub - they may be quite tight.

**⚠ ENSURE THAT THE WHEELS ARE SECURE BEFORE USE.**

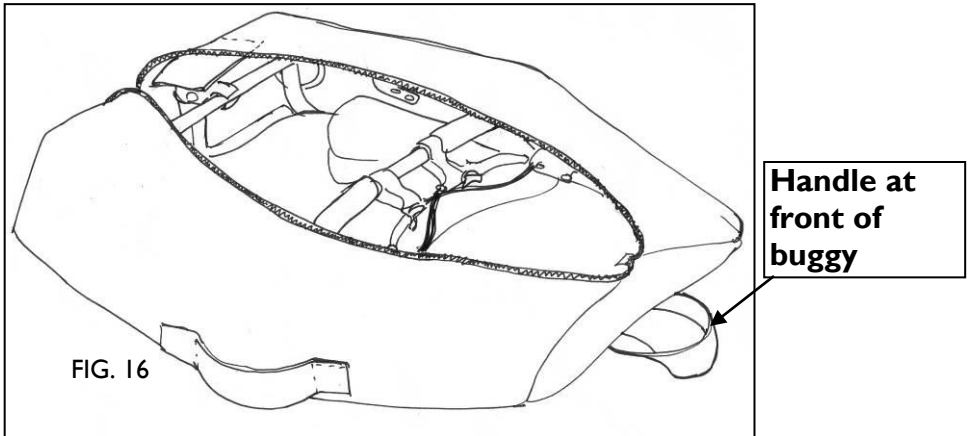
### ADJUSTING THE REAR AXLE POSITION OF THE DELTA BUGGY

The new Delta buggy has an adjustable axle position to change the balance of the buggy making it less or more 'tippy'. The Delta buggy is designed to be balanced so that it is easy to manoeuvre. The default axle setting is in the most forward position. For some occupants whose centre of gravity is further back in the buggy due to body shape the axle can be moved further back.



**To adjust the axle position;** lay the buggy on its side and remove the screws A & B from both sides of the frame.

There are five possible positions; positions 1, 3 & 5 are shown in the diagrams. Rotate the axle assembly to line up the holes in the desired position. Replace the screws with their washers, one side at a time. **The anti-tipper must be adjusted to the correct position corresponding to the axle (see pg.16).**



The easiest way to get the buggy into the bag is to place the open transport bag on the floor and fold the buggy on top of it; **the handle on the end of the bag should be at the front.**

Tuck the back corners of the buggy into the bag first, followed by the front end.

### Using the Delta Beach Wheels

#### **⚠ IMPORTANT SAFETY NOTES ⚠**

♦ **CHECK THAT THE WHEELS ARE SECURE ON THE FRAME BEFORE USE.**

♦ **THE ANTI-TIPPER WILL NOT BE AS EFFECTIVE ON SOFT GROUND, LIKE SAND; TAKE EXTRA CARE.**

♦ **THE DOUBLE WHEELS MAKE THE BUGGY TOO WIDE TO FIT THROUGH STANDARD DOORWAYS.**

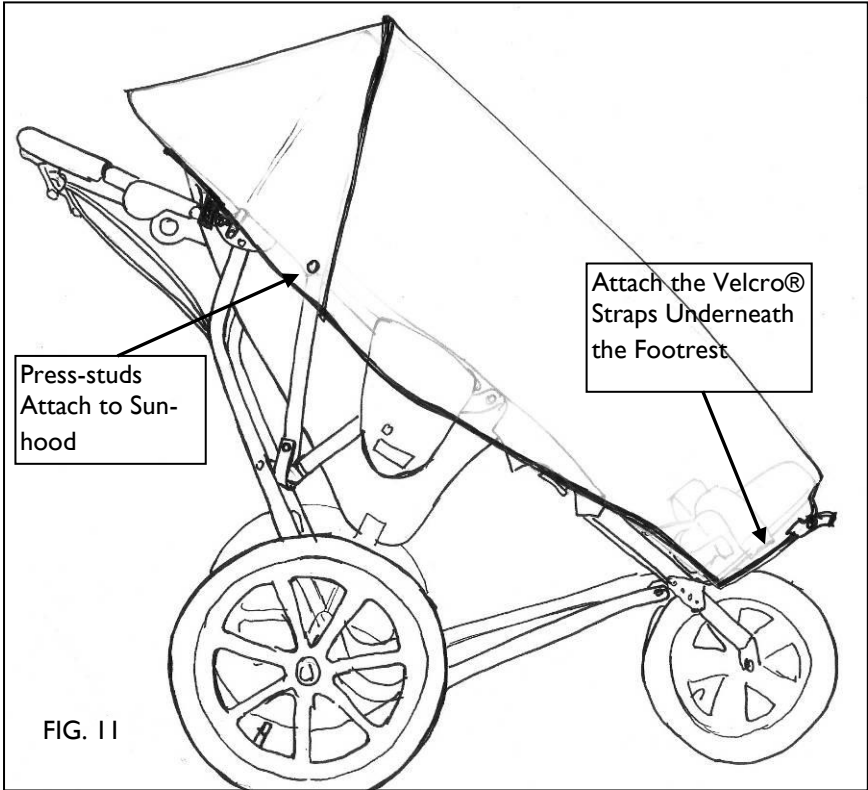
The double width rear wheels are designed to spread the load on soft ground and reduce sinking-in. They are set at lower pressure than standard wheels (10 to 15 p.s.i. or 0.7 to 1 bar) to further spread the load by increasing the surface area in contact with the ground.

The wheels are designed to operate with the standard brakes; when new they may rub slightly on the brakes until they are bedded in.

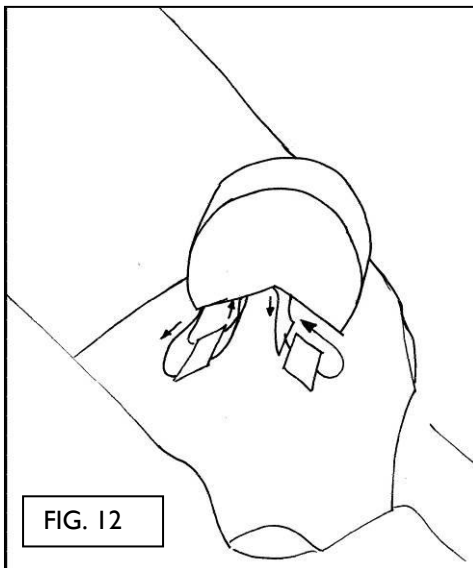
The beach wheels are fitted with stainless steel bearings and quick release axles; **but the brake drum and brakes are not stainless steel and should be cleaned after use on the beach (see maintenance instructions).**

**Fitting the Storm-Cover (Small, Medium & Large Only)**

The storm cover fits over the sun-hood and is secured by a small Velcro® strap on the front of the cover which sticks to the patch of Velcro under the footrest and two Velcro straps that join together under the footrest. Poppers on the cover attach to the sun-hood to hold down the sides.

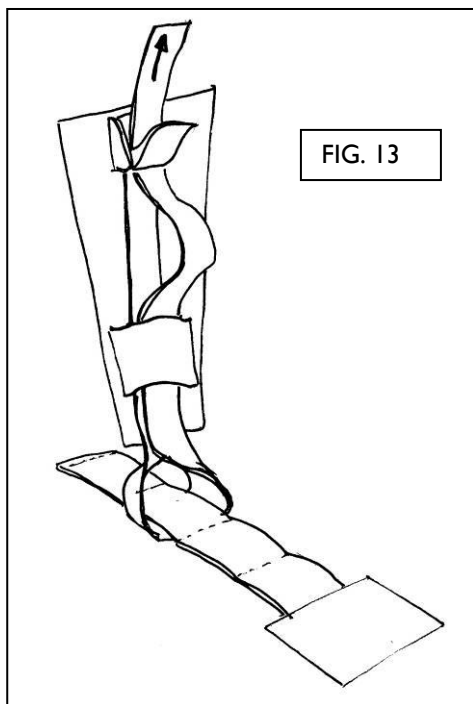


**To attach the pommel;** thread the Velcro on the end of the pommel through the top patch on the hammock seat (see fig. 12), then through the loop on the underside of the pommel followed by the front patch; fold the Velcro back on itself and attach to the hook Velcro on the pommel.



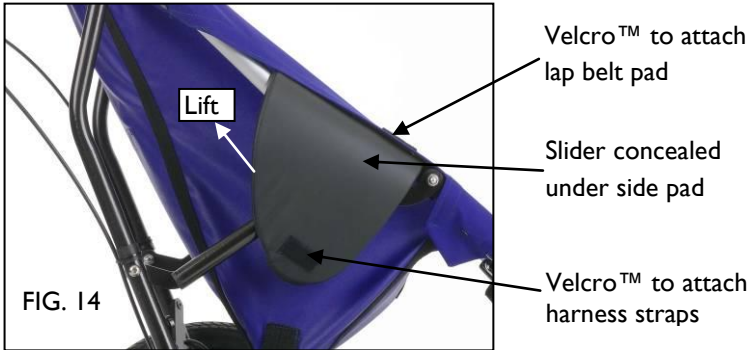
**To attach the groin pad;** thread the strap on the bottom of the pad through the required loop on the seat (see Fig 13) and back through the webbing loop on the bottom of the groin pad; adjust the length and secure in the buckle.

The groin pad can be removed if not required.



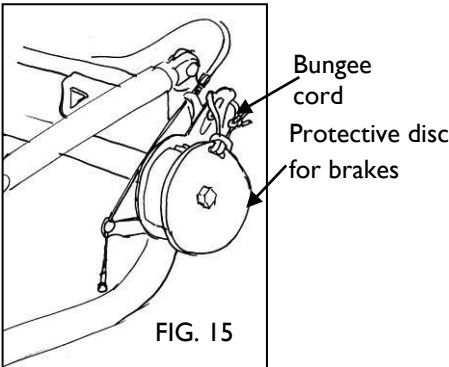
**To fold the Delta Buggy;** first, unclip the retaining strap (this is the narrow strap attached under the front corners of the seat hammock). Secondly fold up the footrest, this is released by pulling the two rings underneath the footplate. The footrest locks into the folded position. *(If you are packing the buggy into the transport bag the easiest way to get it in is to place the open bag on the floor and fold the buggy on top of it - see transport bag instructions below.)* Fold the sun-hood.

Locate the sliders, which are situated under the pads on the side of the frame (see fig. 14) and slide them up the frame, the buggy will fold. Ensure that the side pads tuck inwards into the frame or they will become misshapen in time.



Use the buttons on the inside of the handle adjusters to fold the handle down towards the rear of the buggy.

If required remove the front wheel by lifting the lever on the side and the rear wheels



by pushing the small button in the centre of the hub. **The park brakes must be released to remove the rear wheels. Insert the brake protection discs;** these locate into the end of the axle and are secured by looping the bungee cord over the brake assembly (see fig. 15). The wheels can be stowed in the space in the centre of the folded frame (in a bag if required).

Secure the buggy in its folded state using the tie strap, which is attached under the front corners of the seat hammock, pass it over the top of the frame and clip the ends together with the buckle. Once folded, the Delta can be safely lifted at the midpoint of the frame on either side.

**Transport bag instructions.** The transport bag is reinforced in places subject to more abrasion and the handles are placed asymmetrically for balance, it is therefore important to put the folded buggy the correct way around in the bag.