



INSTALLERS MANUAL

The complete guide to
installing your Multimac
in any vehicle



FITTING INSTRUCTIONS FOR MULTIMAC TETHER STRAPS

Your Multimac has been designed with the highest standards of safety and comfort in mind. So it's essential every care is taken to install it correctly and securely.

This step-by-step guide will walk you through the six types of fitting, clearly illustrating how the tether straps are routed and secured, no matter which vehicle you're fitting your Multimac into.

Once the tether straps have been fitted correctly, you can easily put in or take out your Multimac, quickly and securely.

With the Multimac securely in place you can rest assured your child will enjoy the safest and most comfortable journey possible.



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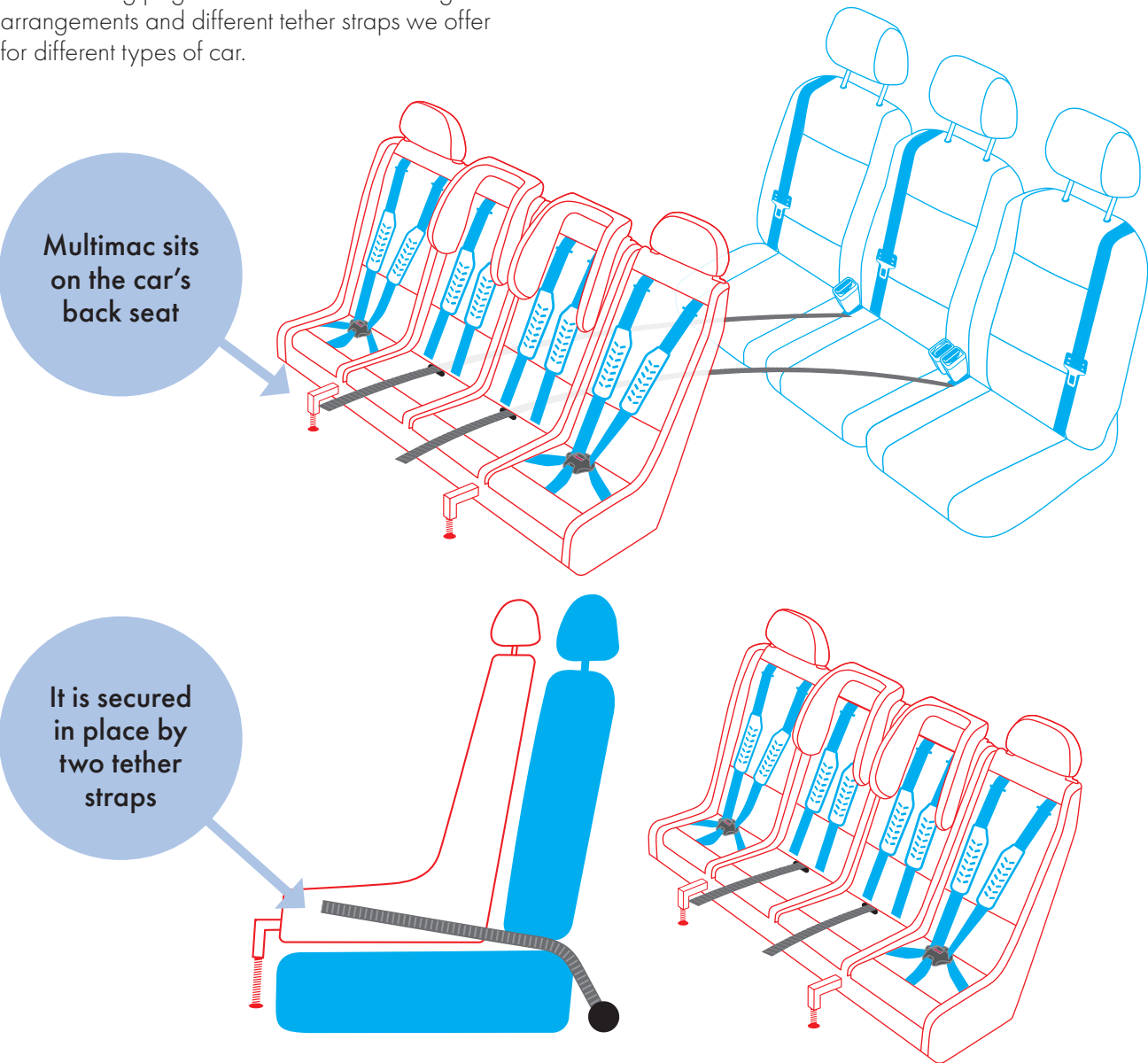
FITTING INSTRUCTIONS FOR MULTIMAC TETHER STRAPS

Once the tether straps have been fitted into your vehicle you can put the Multimac in or take it out yourself in a few minutes.

The tether straps normally attach to the existing seat belt mounting points in your car, which are of sufficient certified strength and we recommend this is done by one of our approved fitting agents, or your local garage, unless you are a competent DIY mechanic.

The following pages show the different fitting arrangements and different tether straps we offer for different types of car.

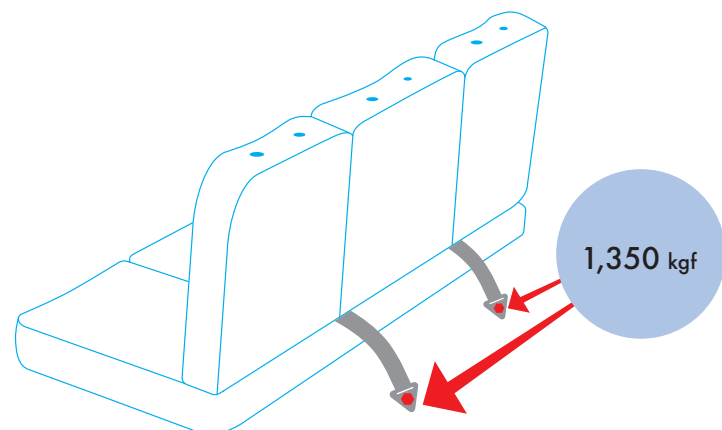
If you state your **car model** and **year** when you order your Multimac, we will send the correct parts with the Multimac, normally to your local fitting agent.



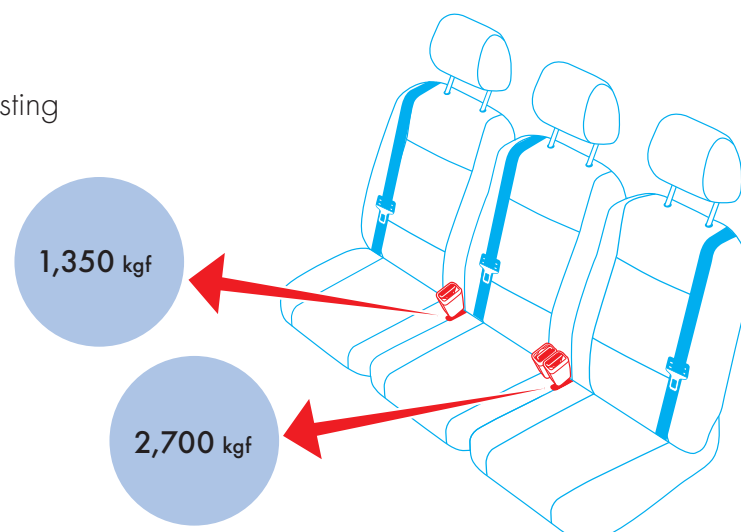
NOTE: ISOFIX POINTS ARE NOT STRONG ENOUGH AND SHOULD NEVER BE USED

STRENGTH REQUIRED

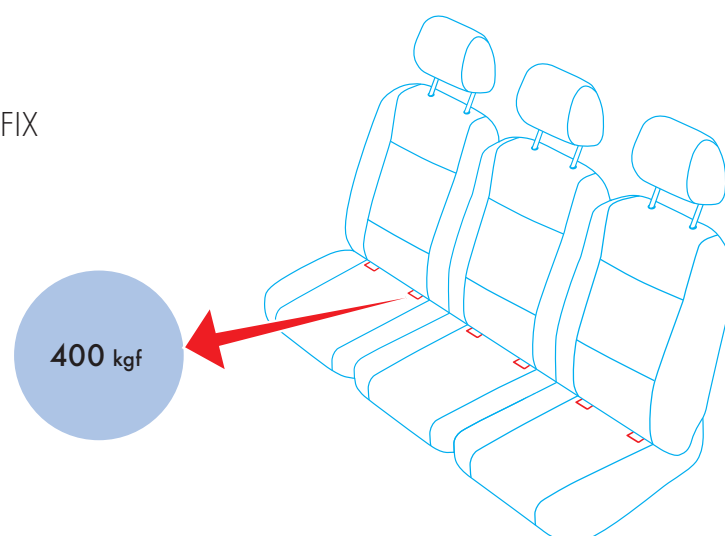
Force in Multimac tethers



Certified strength of existing car belt buckle mounts



Certified strength of ISOFIX



CONCLUSION: You must never use ISOFIX
Any existing buckle mounting is strong enough for Multimac tethers

FITTING THE TETHER STRAPS

The six different types of fitting are described on the following pages and although most cars just require the two tether straps to be fitted, some cars have additional requirements.

Adult Buckles:

- The existing adult buckles may need replacing with our 'flexible' buckles if they protrude rigidly through the car seat cushion and would be damaged by the Multimac sitting on them.

Spacers: may be required

- Under the Multimac:** if your car has a raised centre console in the centre of the back seat.
- Under the Multimac:** if your car adult buckles protrude just a few millimetres above the car seat, rather than replacing them as above.
- Behind the Multimac:** if rigid wheel arches restrict the width of the back seat, and pushing the Multimac forward a few centimetres allows a wider Multimac to fit.
- Behind the Multimac:** if your car has fixed headrests which restrict our headrests from raising and lowering.

Floor plates

- Some cars have 'storage boxes' in the floor in front of the rear seats and the lids of these are not strong enough to support our legs in the case of an accident. For these cars, we provide strong metal plates to replace or fit over the existing lids.

Normally these requirements will be noted on our 'Will it fit?' check page, but if you fail to add them to your Multimac order we will contact you and can add them manually.

Routing of tether straps:

The tether straps should pull the Multimac back and down on to the car seat, so it is important they are routed correctly.

More details of the above are on the following pages.

THE SIX TYPES OF FITTING

Normal Fitting – 1

Replace existing buckle mounting bolt with an eye bolt, and use a standard tether strap.



Normal Fitting – 1A

As above, but with replacement adult buckles.



Normal Fitting – 2

Fit a 'plated tether' onto existing mounting stud and retain the existing car buckles.



Normal Fitting – 2A

As above, but with replacement adult buckles (See 1A).

Normal Fitting – 3

Fit 'wrap around' tether around a structural seat tube.



Normal Fitting – 4

Use an eye-bolt to replace the existing seat mounting bolt.

Normal Fitting – 5

Mixture of 3 and 4, typical for VW type SUVs.

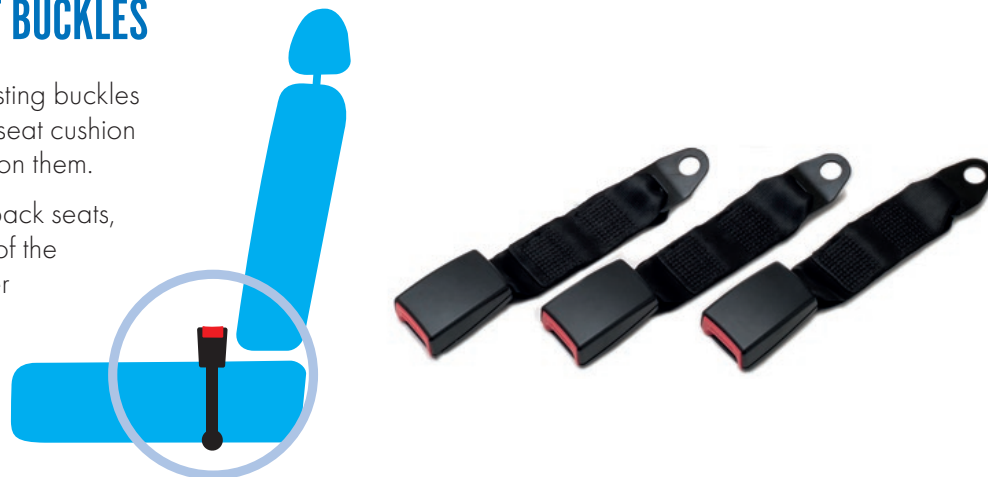
Special Fitting – 6

If none of the above are possible.

REPLACEMENT ADULT BUCKLES

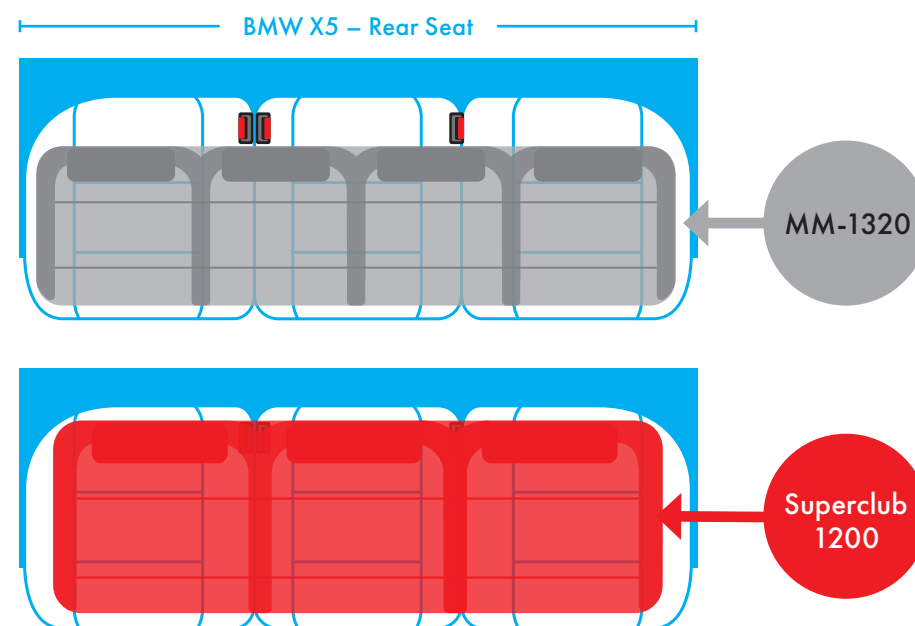
These are required if the existing buckles protrude rigidly through the seat cushion and the Multimac would sit on them.

On some cars with curved back seats, the Multimac will sit in front of the buckles, so it does not matter that they protrude.



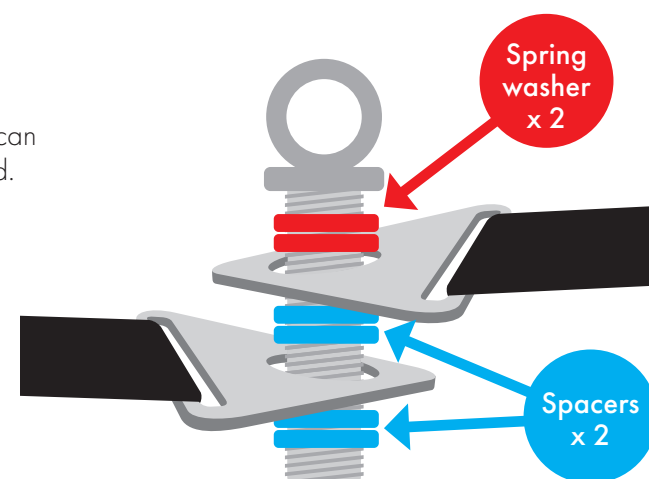
In some cases (BMW X5 for example), our wide MM-1320 4-seater will sit in front of the (rigid) buckles, so they don't need replacing, but the narrower Superclub-1200 would sit on them, so they must be replaced.

We will advise on each order if you do need them.



Our replacement buckles attach via webbing, so they can be tucked out of the way when the Multimac is installed.

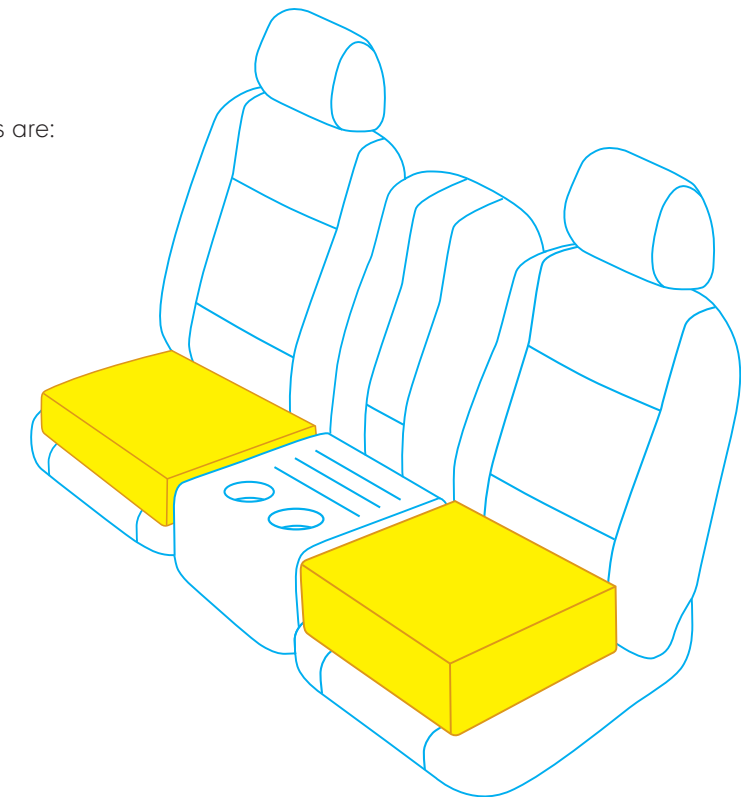
Fitting the replacement buckles is detailed on page 8.



SPACERS

Typical examples of spacer requirements are:

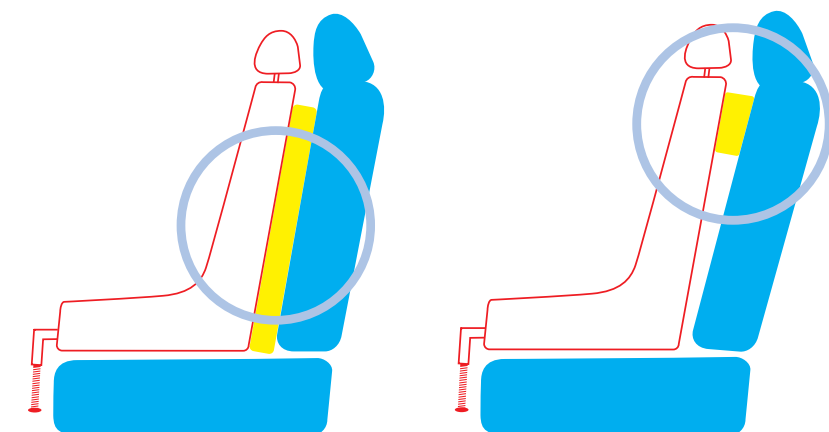
Raised Centre Console



Intrusive Wheel Arches or Curved Back Seat



Fixed Headrests



With fixed back seats

With adjustable back seats

NORMAL FITTING – 1: REGULAR TETHER

Replace existing buckle mounting bolts with eye bolts and use standard tether straps.



Back seat of car



With seat cushion removed



Existing buckles bolted to floor



Bolt removed, and Multimac eye bolt



Multimac eye bolt replaces original bolt



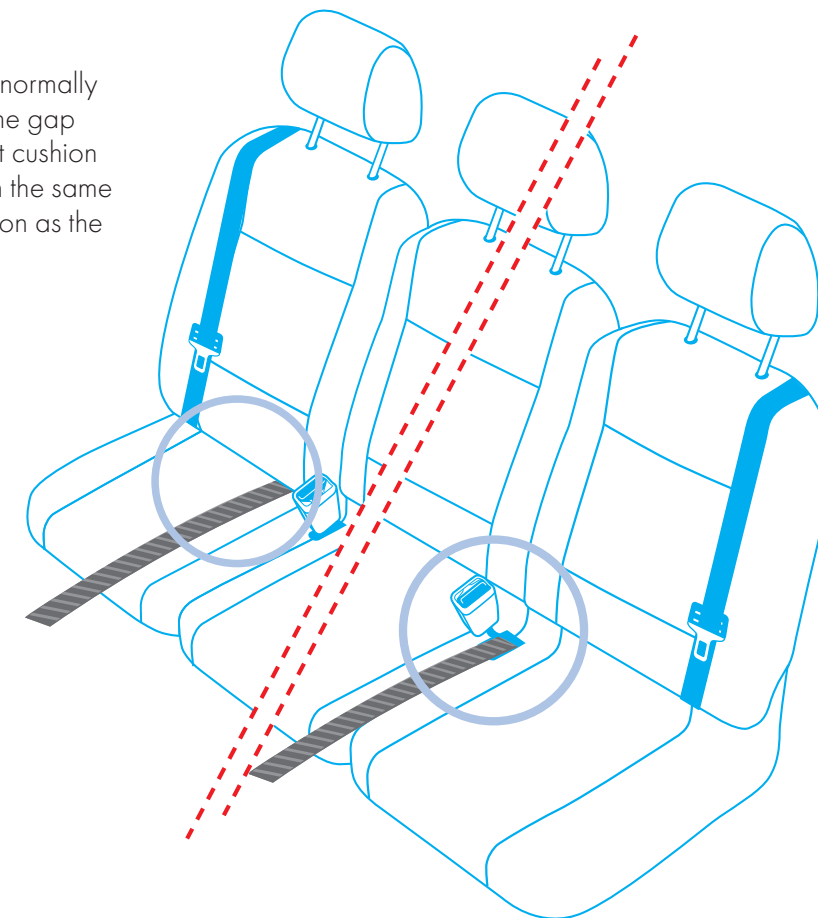
Tether strap fitted to eye bolt



Cushion replaced, showing tether straps and buckles both fitted

Routing:

The tether straps will normally pass either through the gap between the car seat cushion and back, or through the same hole in the seat cushion as the car seat buckles.



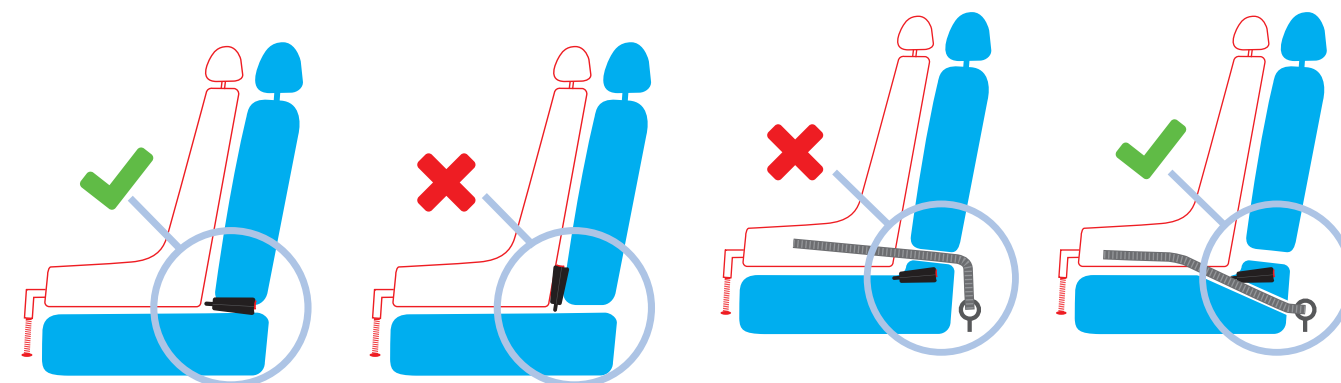
Caution: Obstruction

When fitting the Multimac, check that each existing car buckle is folded out of the way and does not obstruct the Multimac. Ensure each buckle is not trapped between the rear of the Multimac and the car seat, where it can compress the back cover of the Multimac and trap the harness so it cannot adjust.

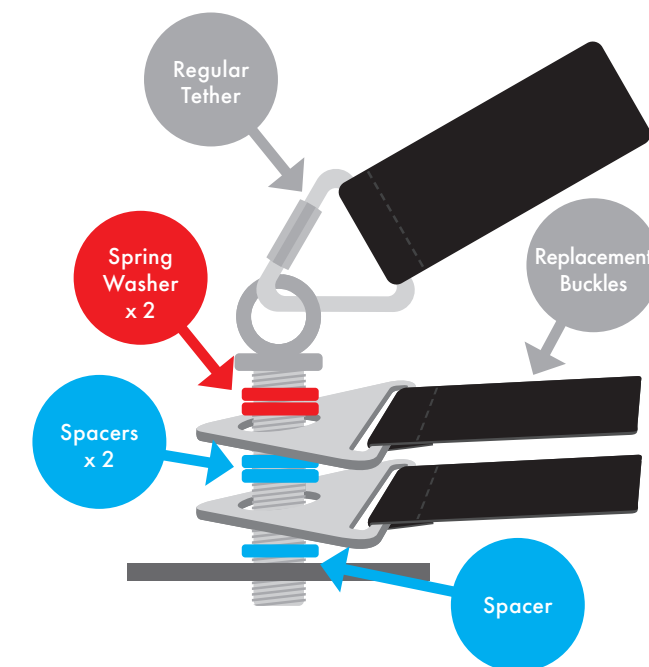
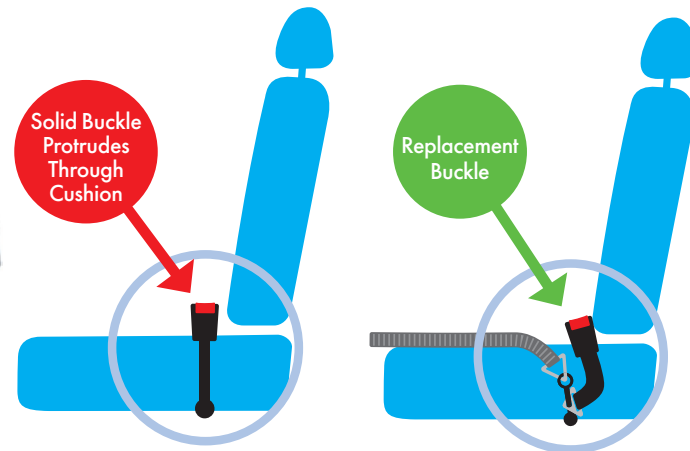
Caution: Height of Tether Strap

Because of ISOFIX points, many car seats now have the joint line between seat base and back above the ISOFIX points which is too high for routing the tether straps.

It is important that the tether straps pull the Multimac back and down into the car seat, so they must be routed lower than this joint line: either passing through the car buckle holes, or remove the plastic housing around the ISOFIX holes and pass them through this.

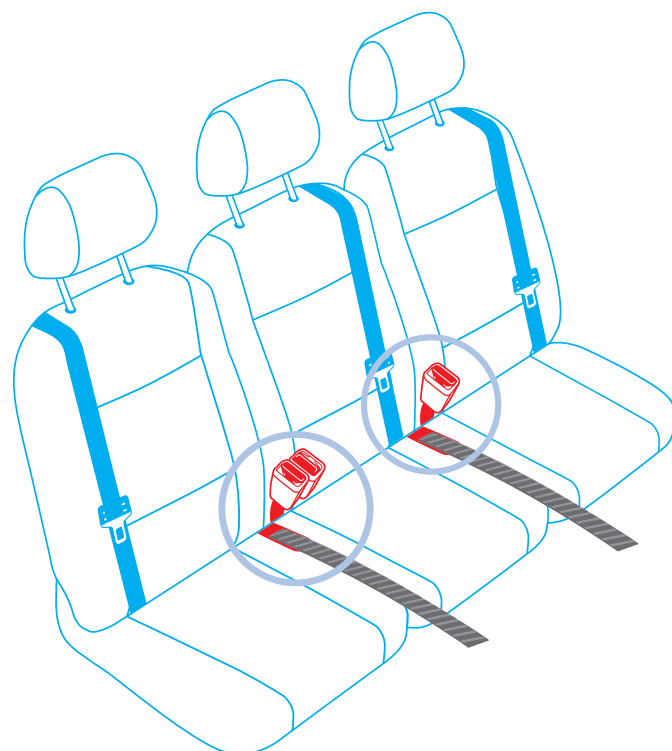


NORMAL FITTING – 1A: REGULAR TETHER WITH REPLACEMENT BUCKLES



If the existing car buckles are obstructive, then they are unbolted and removed. Our supplied replacement buckles are fitted with the spacers as shown right.

The spacers are provided to give clearance between adjacent buckle webbings.



Routing:

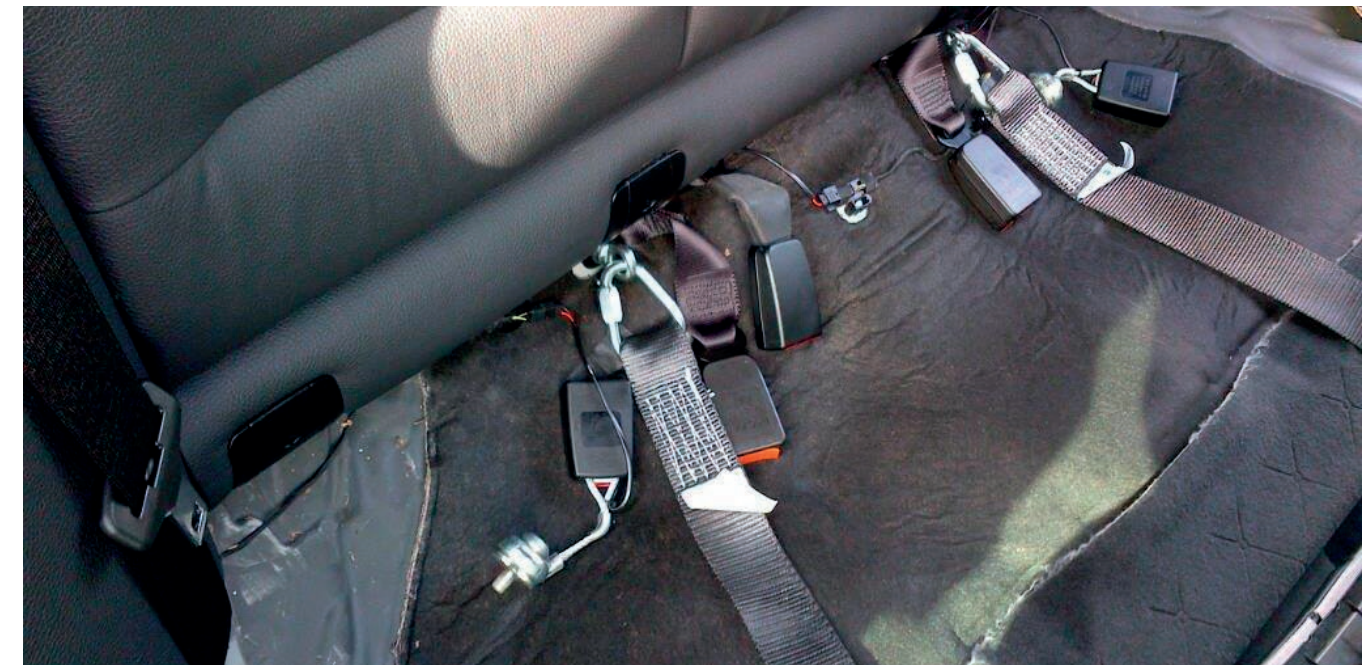
As the objective is to keep the car buckles out of the way and for the tether straps to pull the Multimac back and down, we normally route the new buckles 'over' the top of the seat cushion, so they can easily be recessed out of the way in the gap between seat cushion and back and feed the tether straps through the original buckle-holes in the seat cushion.

Wired Buckles:

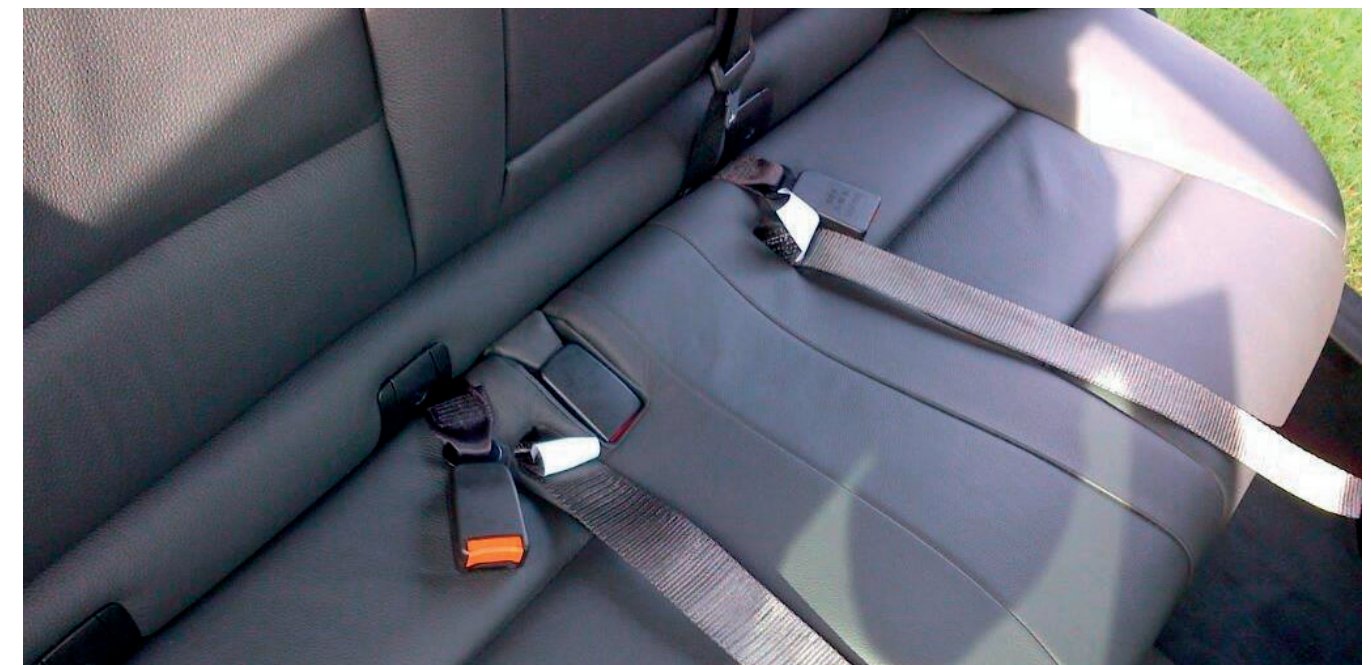
Many modern cars have 'wired' seat belt buckles so that the cars control system knows if the rear seats are occupied. Disconnecting these will cause the ECU to alarm and require an expensive re-set at the dealer, so we normally leave the original buckles attached to their wiring and just lie them in the seat well where they are 'absorbed' by the seat foam.

In some cars with metal seat frames they have to be positioned carefully and this may involve unclipping the cable clips so the buckle can be moved a greater distance away.

The following photos show this arrangement on a BMW 530, both below and above the back seat.



Under the seat, showing original [wired] buckles lying loose in the seat well



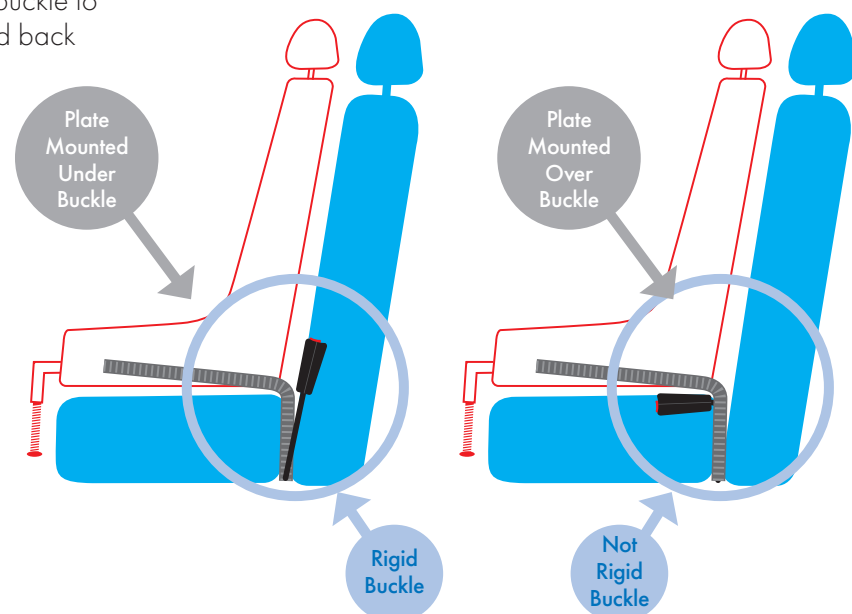
Seat cushion refitted: replacement buckles fed through gap behind the cushion, tether straps fed through original buckle holes

NORMAL FITTING – 2: PLATED TETHER

Some cars mount the seat belt buckles on studs and secure them with nuts. This is traditionally used on American cars, but an increasing number of European cars are now changing over.

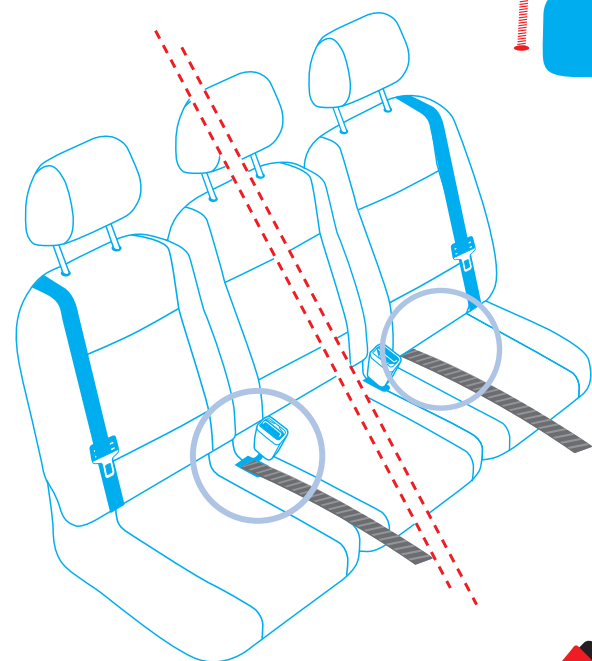
We have an alternative 'plated tether' and how to fit this depends on the configuration of the car and whether the mounting stud is in front of or behind the buckle and whether we want the existing buckle to 'lie down' in a seat recess, or to be pushed back into the seat back.

Additionally, we may mount the 'plate' under the existing buckle, or above it, depending on the right image geometry. ▶

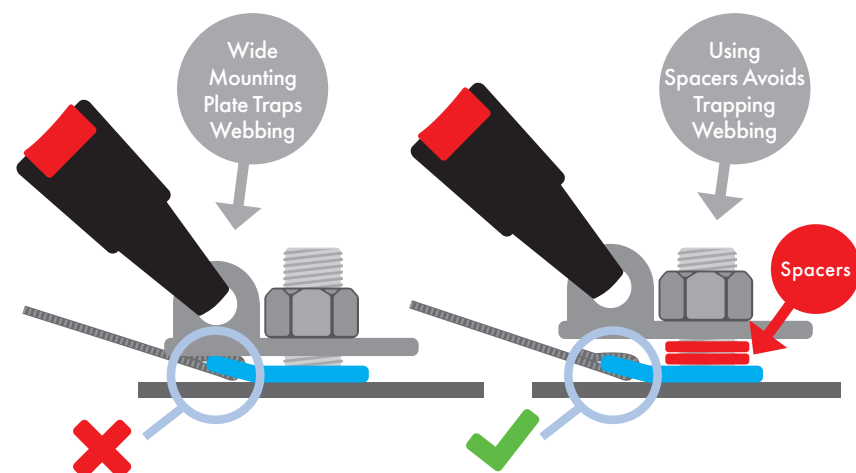


Routing:

The tether straps will normally pass either through the gap between the car seat cushion and back, or through the same hole in the seat cushion as the car seat buckles.



Sometimes the mounting plate for the adult buckles is wider than our tether strap mounting plate and would 'trap' our webbing. In these cases we can put a thick spacer washer between the two so our webbing is not obstructed.



Under the seat cushion, showing the plated tethers fitted



Plated tether fitted above existing buckle, on same stud

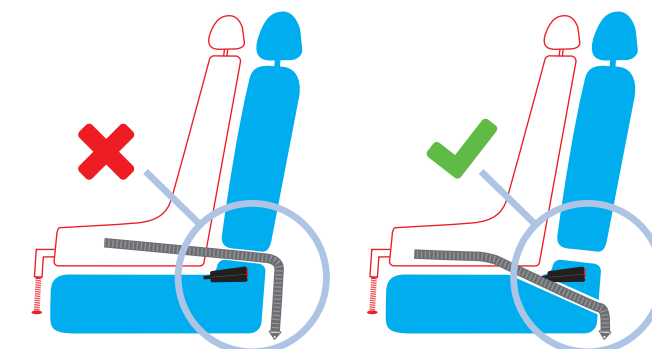


Seat cushion refitted

Caution: Height of Tether Strap

Because of ISOFIX points, many car seats now have the joint line between seat base and back above the ISOFIX points, which is too high for routing the tether straps.

It is important that the tether straps pull the Multimac back and down into the car seat, so they must be routed lower than this joint line: either passing through the car buckle holes, or remove the plastic housing around the ISOFIX holes and pass them through this.

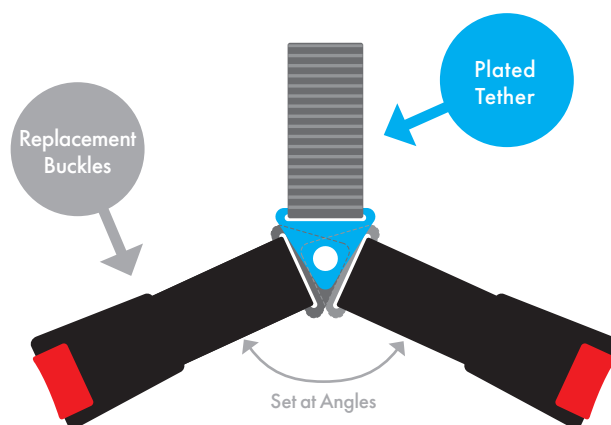
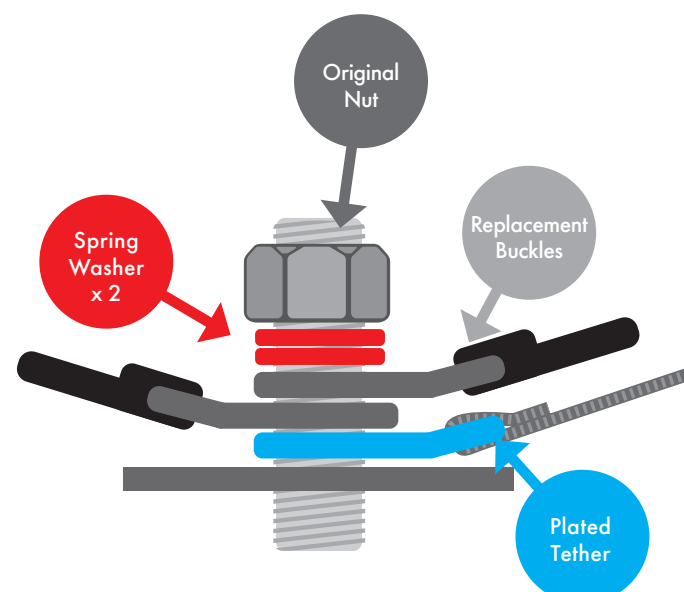
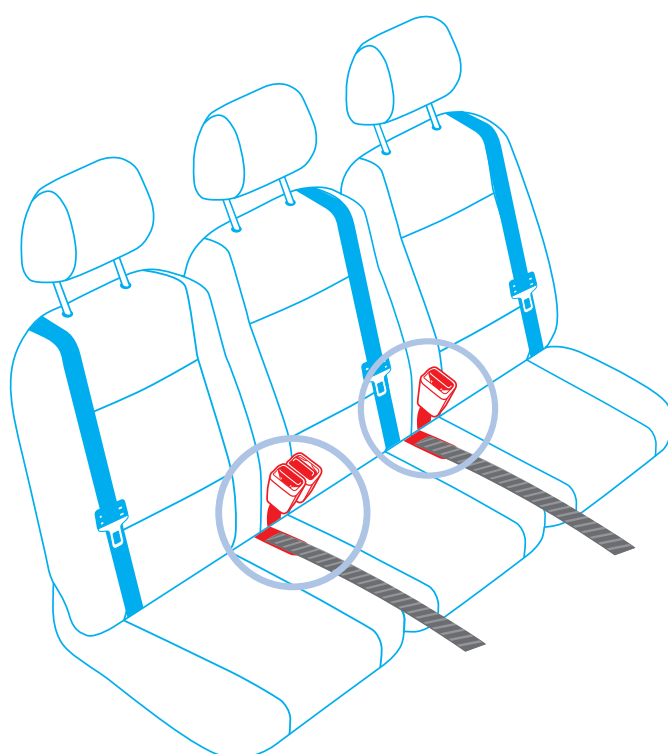


NORMAL FITTING – 2A: PLATED TETHER WITH REPLACEMENT BUCKLES

If the existing car buckles are obstructive, then they are unbolted and removed. Our supplied replacement buckles are fitted as shown.



As the stud may be of limited length we need to reduce the thickness of our additional mounted plates as much as possible. This is best achieved by fitting the replacement buckles at an angle to each other, so the two sets of webbing do not lie above each other.



Routing:

As the objective is to keep the car buckles out of the way for the tether straps to pull the Multimac back and down, we normally route the new buckles 'over' the top of the seat cushion, so they can easily be recessed out of the way in the gap between seat cushion and back. Feed the tether straps through the original buckle-holes in the seat cushion.

Wired Buckles:

Many modern cars have 'wired' seat belt buckles so that the cars control system knows if the rear seats are occupied. Disconnecting these will cause the ECU to alarm and require an expensive re-set at the dealer, so we normally leave the original buckles attached to their wiring and just lie them in the seat well where they are 'absorbed' by the seat foam.

In some cars with metal seat frames they have to be positioned carefully and this may involve unclipping the cable clips so the buckle can be moved a greater distance away.

The following photos show this arrangement on an Audi A6 both above and below the back seat.



Seat cushion removed showing original [wired] buckles lying loose in the seat well



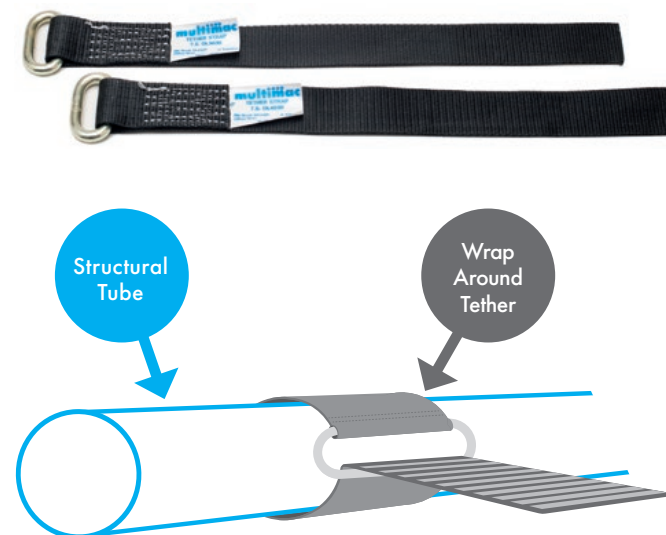
Seat cushion refitted: replacement buckles fed through the gap behind the cushion, tether straps fed through the original buckle holes

NORMAL FITTING – 3: WRAP AROUND TETHERS

A number of cars with sliding rear seats: mainly SUVs and some MPVs, have a seat frame made by the Germany company Brose. This has a main horizontal structural tube at its base to which are attached the sliding mounts, the seat back and the adult buckles.

We have a tether strap which wraps around this tube, which we know is strong enough because it supports the adult buckles.

Typical cars are Range Rover, Audi Q5, BMW X1 (FWD) and 2-series Active Tourer, Discovery Sport, VW Transporter.



Wrap-around-tether wrapped around structural seat tube

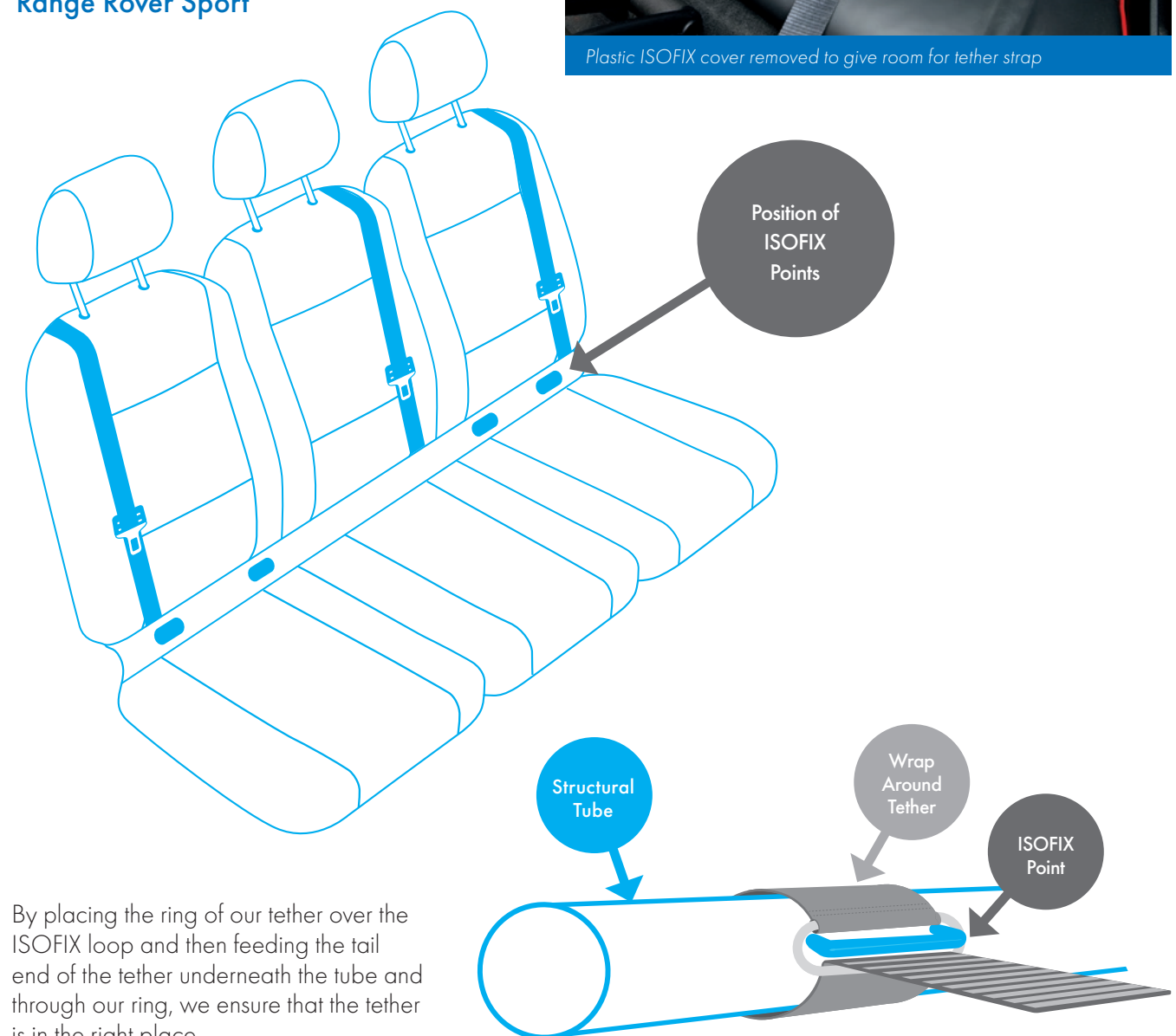
Caution: Plastic covers

If your ISOFIX points have plastic housings around them, these must be removed (unclipped) to give enough width for the tether straps.



Plastic ISOFIX cover removed to give room for tether strap

Range Rover Sport



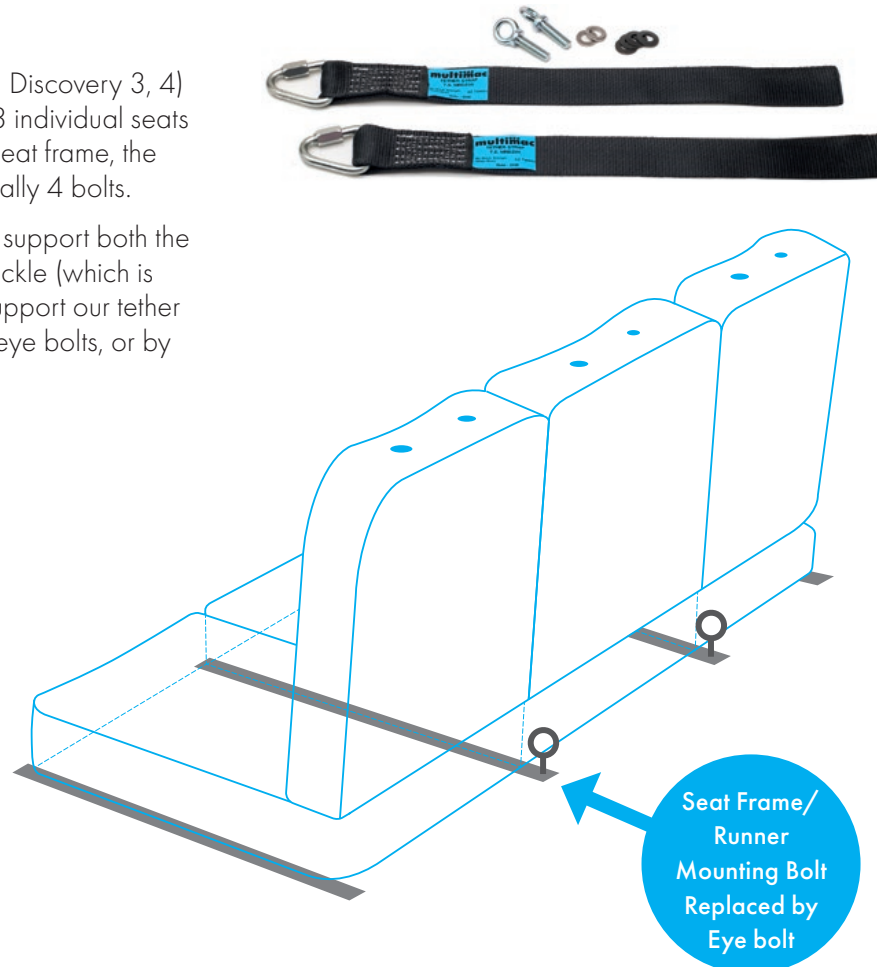
By placing the ring of our tether over the ISOFIX loop and then feeding the tail end of the tether underneath the tube and through our ring, we ensure that the tether is in the right place.

Showing how the ISOFIX point is used as a datum for tether strap position

NORMAL FITTING – 4: USING SEAT FRAME MOUNTINGS

In some SUV type cars (Volvo XC-90, Discovery 3, 4) where the middle row is made up of 3 individual seats with the buckles mounted high in the seat frame, the seat frames bolt to the floor with typically 4 bolts.

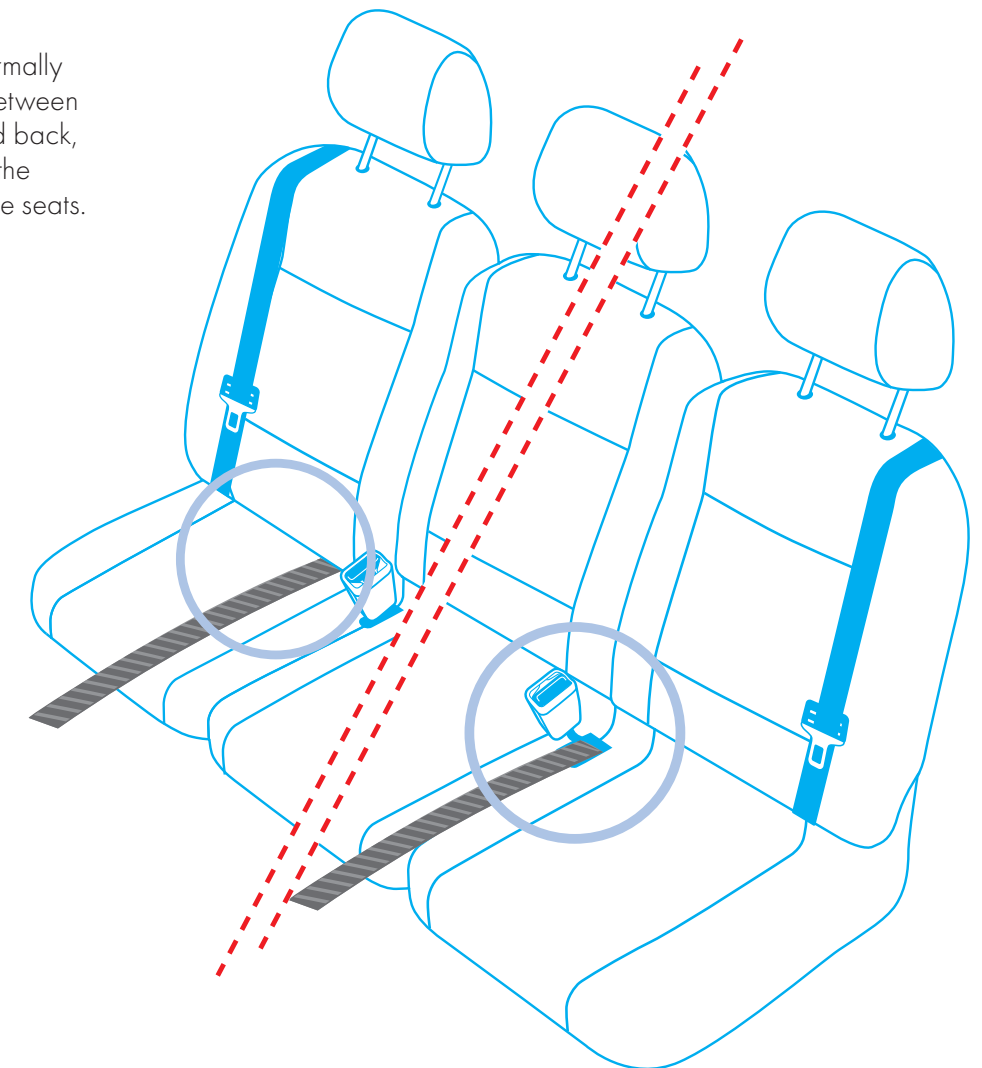
If these bolts are minimum 10mm and support both the seat and by definition the seat belt buckle (which is attached to the seat), then they can support our tether straps, either by being replaced with eye bolts, or by using the plated tethers.



Examples showing eye bolt fixings, and tether strap routings

Routing:

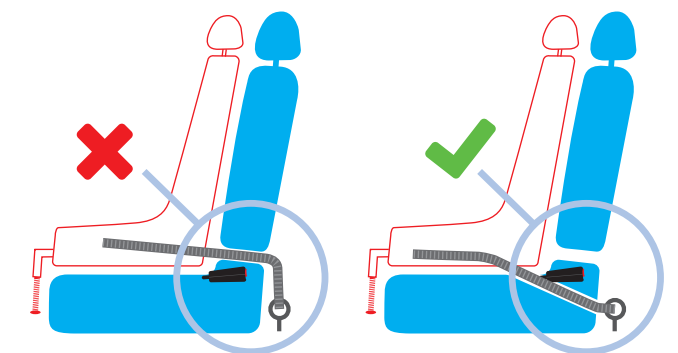
The tether straps will normally pass through the gap between the car seat cushion and back, or alternatively through the vertical gap between the seats.



Caution: Height of Tether Strap

Normally, the tether strap would pass through the gap between the seat back and the seat cushion, but because of ISOFIX points, many car seats now have the joint line between the seat base and back above the ISOFIX points, which is too high for routing the tether straps.

It is important that the tether straps pull the Multimac back and down into the car seat, so if this is the case, it is most convenient to pass each tether strap through the gap between the central seat and the adjacent outer seat. It does not matter that the tether strap goes through this gap 'vertically' and then twists to go horizontally into the Multimac base. The webbing is rated at 5 tonnes and the max force in it is 1.35 tonnes so it has a considerable factor of safety.



NORMAL FITTING – 5: TYPICALLY IN VW GROUP AND OTHER SUVs

These cars typically have the rear seat split 40%–60% and they slide on runners.

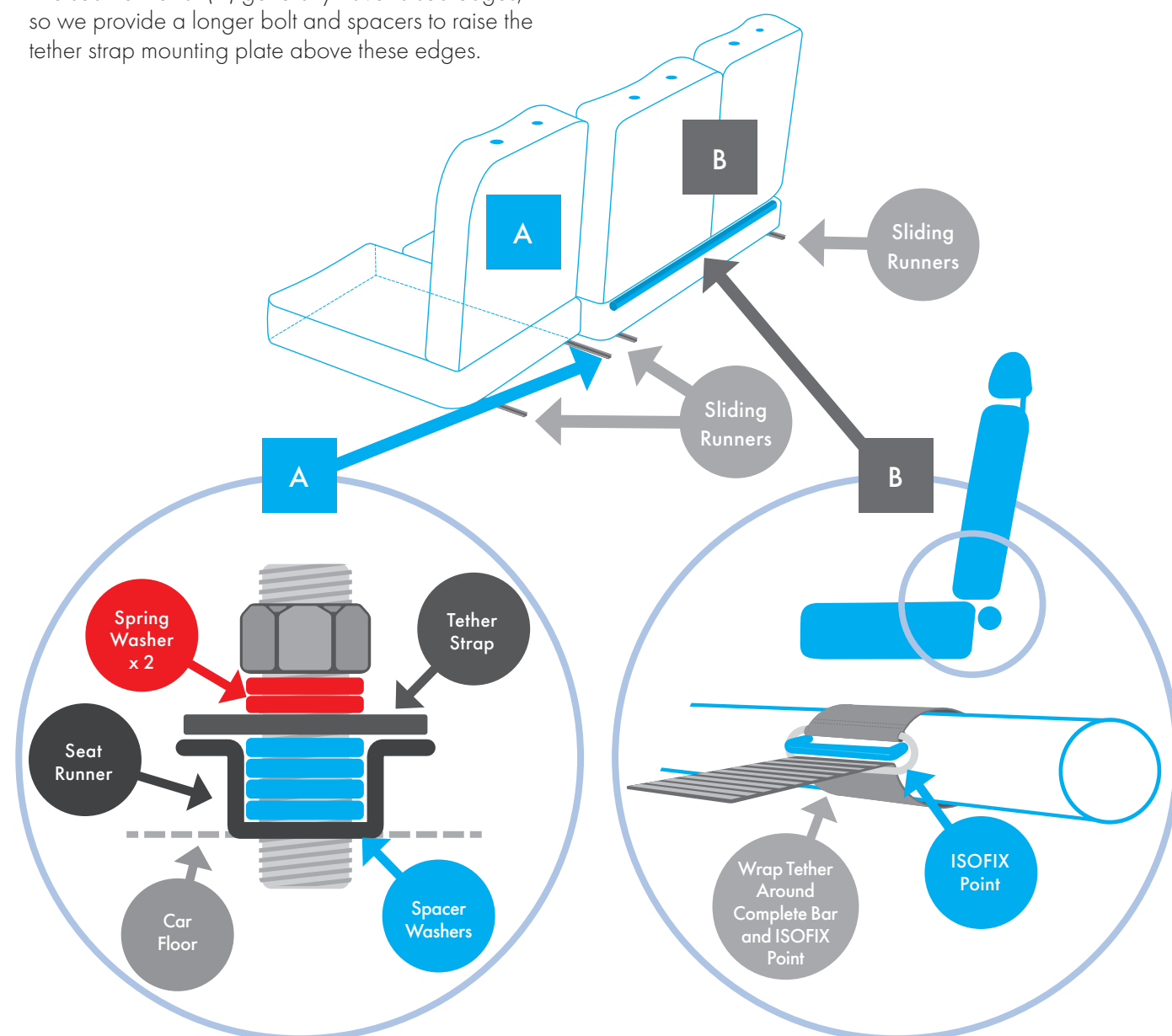
The ideal position of our tether straps is either side of the centre seat, where the seat buckles are, but these mount to the seat frame rather than the floor and are generally inaccessible.

We use two types of fitting, a type-2 tether in the mounting point of the single seat (A) and a 'wrap around' type-3 tether (B) around the structural tube which spans the width of the 'double' seat.

The seat runner at (A) generally have raised edges, so we provide a longer bolt and spacers to raise the tether strap mounting plate above these edges.



The existing buckles generally fold flat out of the way, but if not, they can either be replaced with ours, or spacers used to raise the Multimac above them if they are shallow, or to push it forward if they are not.

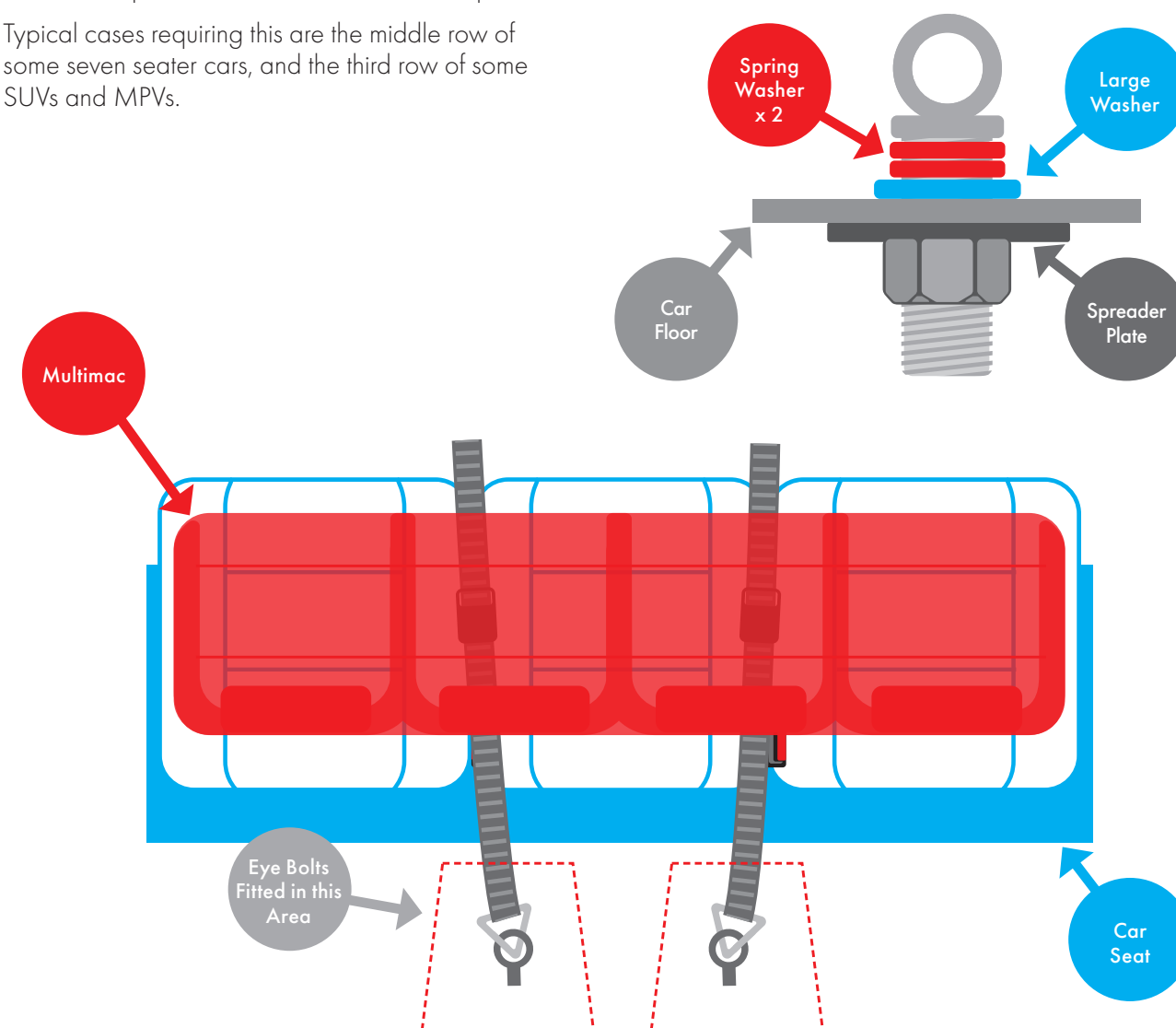


SPECIAL FITTING: NEEDS TO BE DONE BY APPROVED FITTING AGENT

If none of the 5 standard fitting options are suitable for your vehicle, then we have the option of our 'special fitting' components whereby we create 2 suitably strong mounting points for our tether straps in the chassis of the car.

This must be done by either our approved fitting agents, or suitably qualified professional mechanics and we will provide full details to them on request.

Typical cases requiring this are the middle row of some seven seater cars, and the third row of some SUVs and MPVs.



See overleaf for examples

NOTE THAT THE ACTUAL WEBBING HAS A STRENGTH OF 5 TONNES, WHILE THE MAX FORCE IS 1.35 TONNES, SO THERE IS A LOT OF TOLERANCE FOR THE WEBBING NOT TO BE EXACTLY STRAIGHT

Following photographs show some examples:



Floor drilled and eye bolts fitted



Spreader plates fitted under car floor



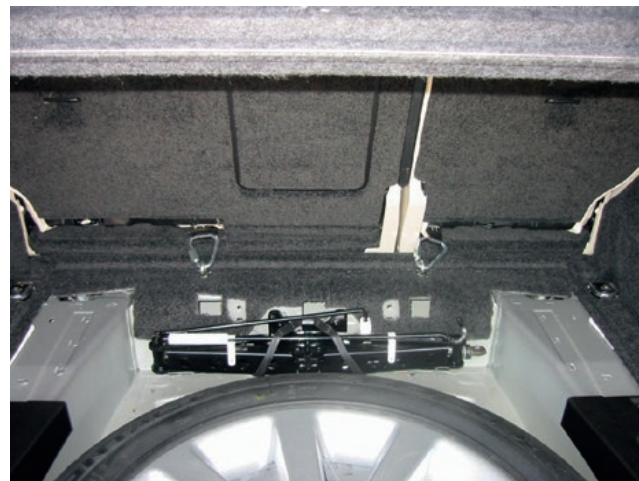
Spreader plates fitted under car floor



Tether straps fitted to eye bolts



Existing holes in Range Rover [L322] used for fitting eye bolts and spreader plates and showing tether straps fitted



FITTING THE MULTIMAC IN THE CAR

- 1** It is heavy, so get a helper unless you are very strong.
 - 2** Take the Multimac out of the box and preferably rest it on some trestles or a table.
 - 3** Put the headrests in the Multimac – noting the positions if you have different types (Tommy or Ylva).
- This is because in most cars the roof is too low to allow the headrests to rise completely out of the sockets.
- Press the buttons in the sides of the headrest sockets to allow the headrests to go in. If you force them in you will break the retaining springs.

- 4** Remove the Multimac seat cushions, to expose the ratchet adjusters and to reduce the weight.



Slide the Multimac in making sure it sits central to the back seat.



Tilt the Multimac forwards slightly to insert the tether straps through the holes in the back of the chassis.



Ensure the straps are not twisted. Feed the tethers through the slot in the spindle. Slide the legs into their sockets.



Check that the Multimac is still central in the car.

- 9** Screw the feet into the legs and slide the legs into the sockets. The final leg length is a matter of trial and error, but if you adjust them so the feet just rest on the floor and measure them to ensure both are the same length, that is a good start. Push them back as far as they will go.



Tighten up both ratchets using the handle. Tighten them up equally rather than 1 before the other, as in some cars this may pull the Multimac to one side.

- 11** Check that the feet are clamped hard against the floor and the Multimac is sitting at the same angle as the car seat.

- If the legs are loose, undo the tether straps, lengthen the legs and try again.
- If there is a big gap between the front of the Multimac and the car seat, undo the tether straps and shorten the legs and try again.



Push any loose tether strap back through the ratchet so it does not hang over the front of the Multimac.



Put the seat cushion/s back in place, making sure the harness is not twisted and comes through the 'recess' at each side of the cushion.





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