



Motorsport Safety Equipment

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Wrapping Around The Roll Cage

Wrap Around

- ▶ Keep the length of the strap as short as possible
- ▶ Optimum angle of -10° , never an upward angle
- ▶ Keep the 3 slide snug up against the tube
- ▶ Always remember to loop back on yourself when threading up
- ▶ Leave at least a 10cm tail
- ▶ Cross over shoulder straps if the tube is more than 50cm behind the seat
- ▶ Use book end stoppers to prevent lateral movement
- ▶ Wrap around helps save weight

Weight Saving:

By wrapping the shoulder straps around the roll cage, the driver can quickly reduce the weight of the car by two snap hooks, two eyebolts and two backing plates. This combined weight saving is 0.568 Kg per harness, or 1.136Kg if you are in a rally car and have two harnesses.

The weight saving can be further increased if you can also wrap around the roll cage on the crutch strap anchorages too. Potentially on a 6pt harness by wrapping around the roll cage on the shoulder straps and on the crutch straps you could save 1.136Kg per harness or 2.272Kg for a driver and a co-driver.

The weight savings are not just on the hardware though. On most cars the roll bar is often directly behind the seat. This means less webbing will be used on a shorter harness that has been wrapped around the roll cage directly behind the seat compared to a longer shoulder strap that is anchored all the way to the floor in the rear of the car.

75mm webbing weighs 0.98Kg per Metre. Even a conservative 60cm length saving per strap equates to 0.17 Kg per harness, or 0.234Kg saving for rally teams when both the driver and co driver's harness is wrapped around the roll cage directly behind the seat.



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Safety:

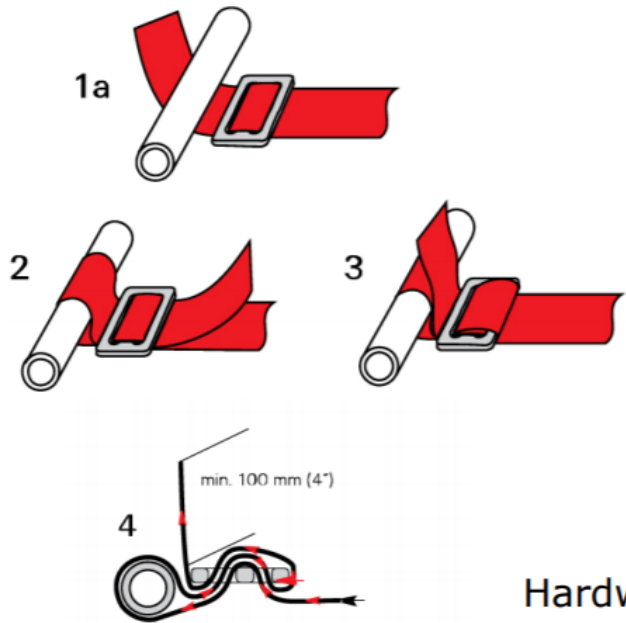
When wrapping harnesses around the roll cage there are several safety considerations to be aware of.

Always make sure that the webbing passes smoothly through the seat opening and is not chaffing on any seat mounts or sharp edges. Sharp edges can cause the webbing to abrade or cut. Always make sure that the 3 bar slide is as close to the harness bar as possible. This is important because a loose 3 bar slide can cause slippage. When wrapping around the roll cage always make sure that you remember the final locking loop. For a pictorial explanation of how to correctly thread up, please click this link. Once you have done the final locking loop make sure that you have at least 10-15cm of web as a tail. Excess webbing can either be neatly rolled up and cable tied out of the way or cut short at the TRS factory at point of order.

The shorter the strap the better. This is because polyester webbing has a typical elongation of 3-5%, and the shorter the strap the less elongation during crash conditions. If the roll cage is more than 50cm behind the seat, TRS recommend that you cross the shoulder straps over. This increases stability during a crash.

The optimum angle for wrapping around the roll cage is -10° . Any angle between 0° to -30° is acceptable, but never an upward angle.

To prevent lateral movements of the shoulder straps whilst going around a corner, bookend the location of the straps with stoppers. This will stop the belts sliding along the tube when you go around a corner.



Hardware
attachment
instructions



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