

# Rear End Collision Risk

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Have you ever considered what would happen in an accident if another vehicle collided with the back of your Morgan?

In anything other than a minor bump there is a good chance that the petrol tank would be punctured with a consequential high risk of fire quickly engulfing the car due to the escaping petrol igniting. This event is likely to happen due to the close proximity of the tank to the bracket that carries the hand brake mechanism on the differential and the mounting of the tank onto wooden boards with only a few securing bolts.

The following pictures show two occurrences where the tank has shifted forward in a collision and been punctured on the hand brake bracket. One was a partially oblique sideways impact and the fuel fortunately did not ignite, The other ignited instantly and the entire car was engulfed in flames within two seconds with the occupants only just luckily managing to escape and avoid incineration despite jammed doors.



The best preventative for this scenario would probably be to fit a fuel cell in the tank as used in racing cars. This is a costly solution and presents problems with the fuel gauge sender. However, there is a simple modification that can be made which may help to minimise the risk of the fuel tank puncturing on the hand brake bracket and this is to fit a reinforcing plate on the tank to spread the impact.

The fuel tank on my 4/4 is just under 8 inches in height and I found a piece of 3 mm steel plate and cut a piece 11 inches by 6 inches which when bent into a U shape gave a return of one and a half inches top and bottom. I rounded the corners to prevent them from puncturing the tank. 1/8 or 1/4 inch plate would probably offer more protection, but 3mm was all I had on hand and it was easy to bend. After painting the plate I cleaned the tank and attached the plate with some silica sealant. So far it has stopped in place and hopefully will provide some deterrent to the fuel tank being punctured should the unthinkable happen.



This modification now gives me some peace of mind when I see in the rear vision mirror a monstrous four wheel drive tailgating me with the apparent intention of climbing into the rear seat.