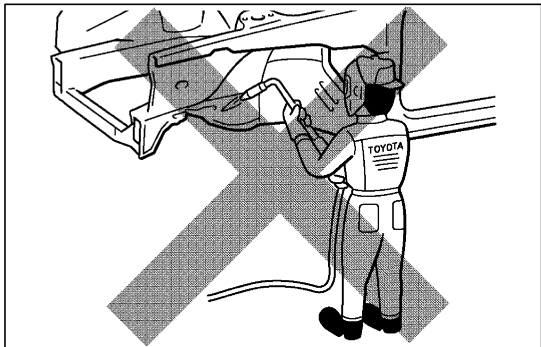


PRECAUTIONS FOR REPAIRING BODY STRUCTURE PANELS



1. HEAT REPAIR FOR BODY STRUCTURE PANELS

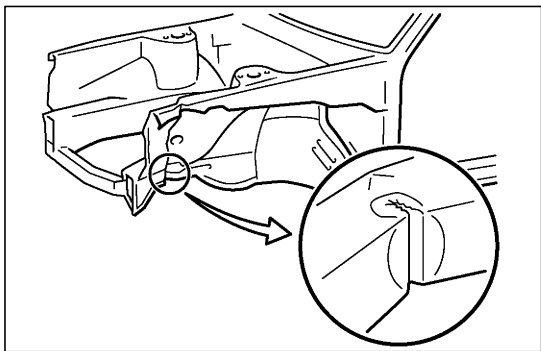
Toyota prohibits the use of the heat repair method on body structure panels when repairing a vehicle damaged in a collision.

Panels that have high strength and rigidity, as well as a long life span for the automobile body are being sought after. At Toyota, in order to fulfill these requirements, we use high tensile strength steel sheets and rust preventive steel sheets on the body.

High tensile steel sheets are made with alloy additives and a special heat treatment in order to improve the strength. To prevent the occurrence of rust for a long period of time, the surface of the steel is coated with a zinc alloy.

If a body structure part is heat repaired with an acetylene torch or other heating source, the crystalline organization of the steel sheet will change and the strength of the steel sheet will be reduced.

The ability of the body to resist rust is significantly lowered as well since the rust resistant zinc coating is destroyed by heat and the steel sheet surface is oxidized.

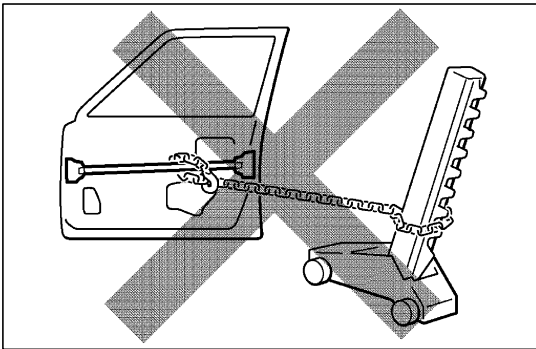
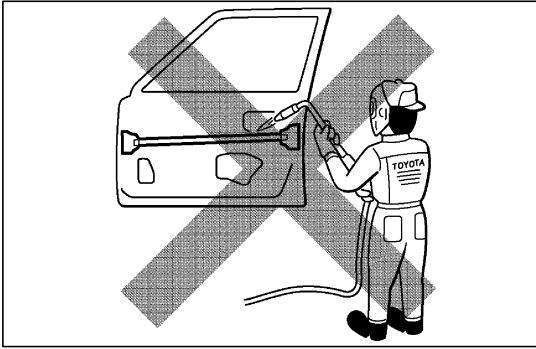


2. STRUCTURE PANEL KINKS

A sharp deformation angle on the panel that cannot be returned to its original shape by pulling or hammering is called a kink.

Since structure parts are designed to exhibit their performance in their original shape, if parts are deformed in an accident, or if the deformed parts are repaired and reused, the parts may become unable to exhibit the same performance as intended in the design.

It is necessary to replace the part where the kink has occurred.



3. IMPACT BEAM REPAIR

The impact beam and bracket are necessary and important parts that help reduce the probability of injury to passengers in side collisions.

For impact beam, we use special high tensile strength steel.

The high tensile strength steel maintains its special crystalline organization by heat treatment or alloy additives.

Since these parts are designed to exhibit its performance in their original shape, if parts are deformed in an accident, or if the deformed parts are repaired and reused, the parts may become unable to exhibit the same performance as intended in the design.

If the impact beam or bracket is damaged, replace the door assembly which has the damaged beam.

Also, the bumper reinforcement is a necessary and important part that helps reduce the probability of injury to passengers in front collisions, and for the same reasons explained above, should be replaced if damaged.

4. FRONT FENDER APRON, FRONT SIDE MEMBER, AND REAR FLOOR SIDE MEMBER PARTS REPAIR AND REPLACEMENT

- (1) It is not possible to adjust the camber during a repair or replacement of the front fender apron, front side member, or rear floor side member parts. Therefore, the link arms and the front and rear suspension members must be mounted with a high level of accuracy.

REFERENCE:

For details on the inspection and adjustment of the linkage arms, refer to the general repair manual.

Body dimensions

	Upper Arm Installation Area
Front Fender Apron	Tolerance: within ± 1.5 mm (0.059 in.)

	Suspension Member Installation Area
Front Side Member	Tolerance: within ± 2 mm (0.079 in.)
Rear Floor Side Member	Tolerance: within ± 2 mm (0.079 in.)

Suspension member dimensions

	Suspension Member Installation Area	Each Linkage Arm Installation Area
Front Side Member	Tolerance: within ± 2 mm (0.079 in.)	Tolerance: within ± 1.5 mm (0.059 in.)
Rear Floor Side Member	Tolerance: within ± 2 mm (0.079 in.)	Tolerance: within ± 1.5 mm (0.059 in.)

*Replace the respective suspension member if its measurement is out of standard or it exhibits a visible deformation.