

BODY PANEL CONSTRUCTION

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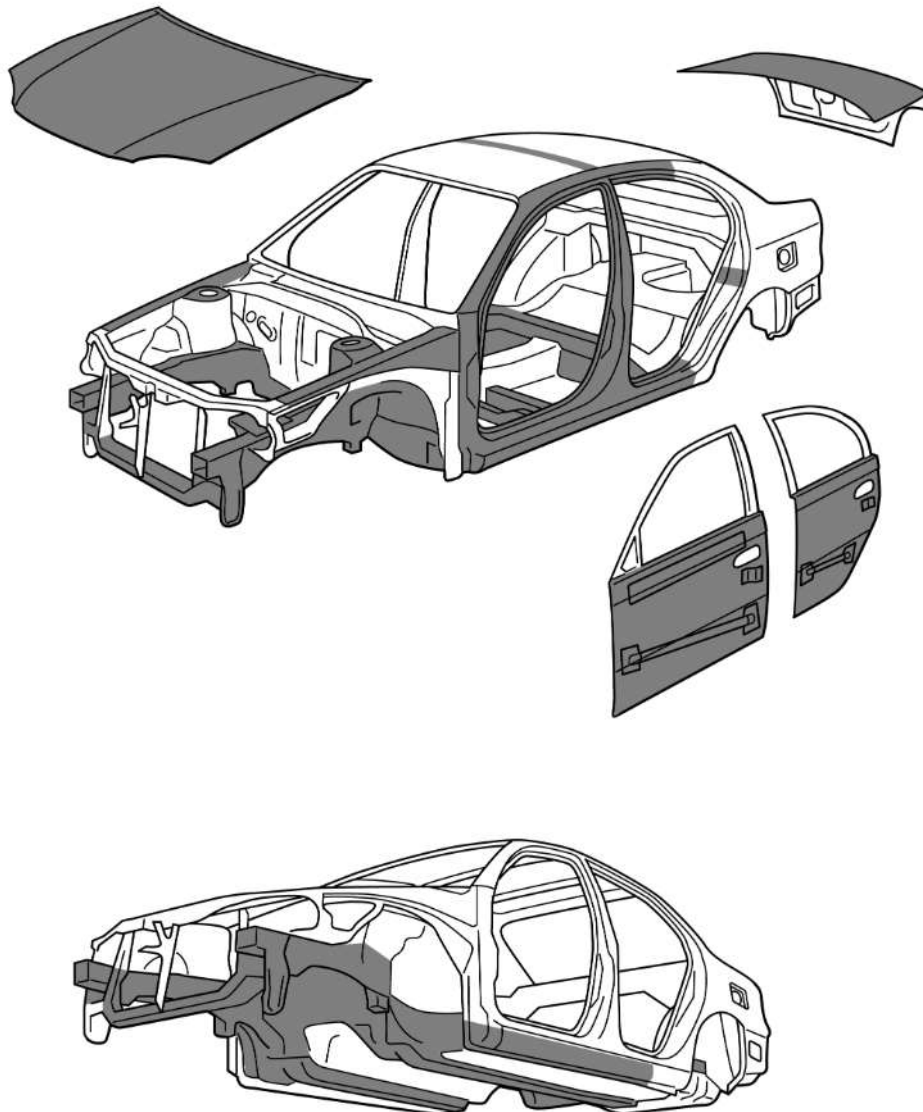
HIGH-STRENGTH STEEL (HSS) PARTS

Generally, High-Strength Steel (HSS) is that which has an intensity value of at 35 kgf/mm² (343 MPa), and distinguished from mild steel.

The handling of HSS is the same as for mild steel, but the following should be observed.

1. **Panel Hammering:** Because HSS is thinner than mild steel, care should be taken to avoid warping during hammering operations.
2. **Removing Spot Welds:** Because HSS is tougher than mild steel, damage will occur more easily to a regular drill. Therefore, an HSS Spot Cutter is recommended. Also, use a high-torque drill at low speed, and supply grinding oil to the drill use.
3. **Panel Welding:** Panel welding procedures for HSS are exactly the same as for mild steel. Plug welding should be done with MIG (Metal Inert Gas) welder. Do not gas weld or braze panels at areas other than specified.

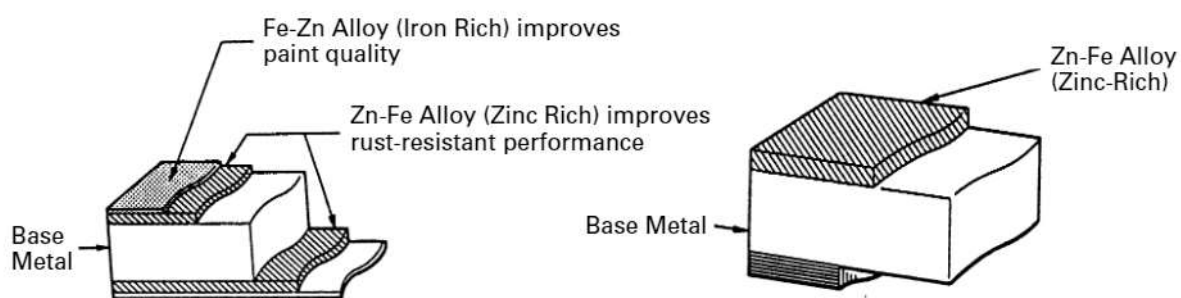
 : High Strength Sheet Steel



RUST-RESISTANT SHEET STEEL PARTS

Rust-Resistant Sheet Steel have zinc, tin or aluminum etc, plating over the base metal surface in order to improve the corrosion resistance of the sheet metal. This sheeting is used on areas that require anti-corrosive abilities but there is no need to distinguish the differences between rust resistant sheet steel and ordinary sheet steel in body repair.

Body panels on TOYOTA models are made of two different melted galvanized sheet steel. The ordinary melted galvanized sheet has a zinc plating over the base metal surface and when heated a zinc-iron alloy plating. The zinc-iron double layered galvanized sheet has a iron rich and another zinc-rich layer above the sheet steel. These 2 layers improve paint adhesion. These two melted galvanized sheet steels are used selectively according to need.



Double Layered Zinc-Iron Galvanized Sheet Steel

Galvanized Sheet Steel

The handling of Rust-Resistant Sheet Steel is the same as for ordinary sheet steel, but the following should be observed.

1. **Panel Welding:** The paint as well as the zinc portion must be removed completely from the welding area to guarantee good welding integrity.
2. **Anti-Rust Treatment:** Since the zinc plating is lost after welding, anti-rust treatment of the welded area must be thoroughly performed (refer to section AR).

 : Galvannealed Sheet Steel

