

2003 Saturn Ion

Description and Operation

General Body Construction (Unibody) Description

This information pertains to unitized body construction. The engine and transaxle, front suspension control arms, and rack and pinion steering are supported by the engine frame which is bolted to the vehicle at six locations. Each mounting location is cushioned by a thick rubber insulator. These insulators are specifically designed for each location to give the proper amount of structural strength while providing maximum road noise isolation. Different insulators are used at the various frame-to-body attaching points to change ride and handling characteristics of the vehicle.

Mounting provisions for the front suspension system are also shared by the body components through the suspension strut towers. The towers must be dimensionally correct in relation to the underbody to maintain proper suspension geometry.

With unitized body construction, underbody components must be properly aligned to assure correct suspension location. In case of collision damage, it is important that the body dimensions be checked thoroughly, and if necessary, realigned in order to accurately establish proper dimensions.

Since the individual underbody components also contribute directly to the overall strength of the body, it is essential that the proper welding techniques be

observed during service repair operations. The underbody components should be properly sealed and rustproofed whenever body repair operations destroy or damage the original sealing and rustproofing. When rustproofing critical underbody components, it is essential to use a quality air dry primer such as corrosion-resistant chromate or equivalent material. Combination type primer-surfacers are not recommended.

Door Frame Description

The side door frame openings feature a unique modular build sub-assembly design in order to improve manufacturing quality. The openings are composed of numerous individual components that are pre-assembled and attached to the vehicle as a single unit.

You may replace the door frame as a complete unit. Various segments of the door frame may be sectioned, which is usually much faster and more cost effective. A front and rear half also are available for complete or sectioning procedures. There are some key structural areas where sectioning should not take place. Service parts for sectioning must be cut from the service assembly and modified as necessary.