

## SECTION 10-3

# UNDERBODY

**CAUTION:** This vehicle is equipped with Supplemental Inflatable Restraint (SIR), refer to CAUTIONS in SECTION 9J under "ON-VEHICLE SERVICE" and the SIR Component and Wiring Location view in SECTION 9J before performing service on or around SIR components or wiring. Failure to follow CAUTIONS could result in possible air bag deployment, personal injury or otherwise unneeded SIR system repairs.

**CAUTION:** To help avoid personal injury when a vehicle is on a hoist, provide additional support for the vehicle at the opposite end from which components are being removed. This will reduce the possibility of the vehicle falling off the hoist.

**NOTICE:** Always use the correct fastener in the proper location. When you replace a fastener, use ONLY the exact part number for that application. General Motors will call out those fasteners that require a replacement after removal. General Motors will also call out the fasteners that require thread lockers or thread sealant. UNLESS OTHERWISE SPECIFIED, do not use supplemental coatings (paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and joint clamping force, and may damage the fastener. When you install fasteners, use the correct sequence and tightening specifications. Following these instructions can help you avoid damage to parts and systems.

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## GENERAL DESCRIPTION

### GENERAL BODY CONSTRUCTION

This vehicle features a unitized body, which is welded to the frame and standard frame-to-body mounts are not used. The engine, front suspension and lower control arms are tied to the body frame.

Mounting provisions for the front suspension system are shared by chassis components (suspension lower control arms and body frame) and body components (engine compartment side panels). The suspension towers must be dimensionally correct in relation to the remainder of the underbody in order to

maintain specified suspension strut and caster/camber angles.

Since the individual underbody components also contribute directly to the overall strength of the body, it is essential that 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 or rustproofing. When rustproofing critical underbody components, it is essential to use a quality air dry primer such as corrosion-resistant chromate, or equivalent. Combination type primer-surfaces are not recommended.

## 10-3-2 UNDERBODY

### ON-VEHICLE SERVICE

#### ALIGNMENT CHECKING

An accurate method of determining the alignment of the underbody utilizes a measuring tram gage. The tram gage set required to perform the recommended measuring checks must include a vertical pointer capable of reaching 914 mm (36-inches).

Two types of measurements can be made with a tram gage: direct point-to-point measurements and measurements calculated on a horizontal plane (datum line) parallel to the underbody. In the latter case, the height or vertical pointers must be set as specified for each point to be measured.

Point-to-point measurements are generally taken on front structure steering and suspension components and simply require the vertical pointers to be equally set. In some cases point-to-point measurements may be directly taken with a tape measure or other appropriate measuring tool.

Dimensions-to-gage holes are measured to the leading edge or center of the holes and flush to adjacent surface metal. Refer to "Underbody

Dimensions" later in this section for alphabetically identified points of measurements.

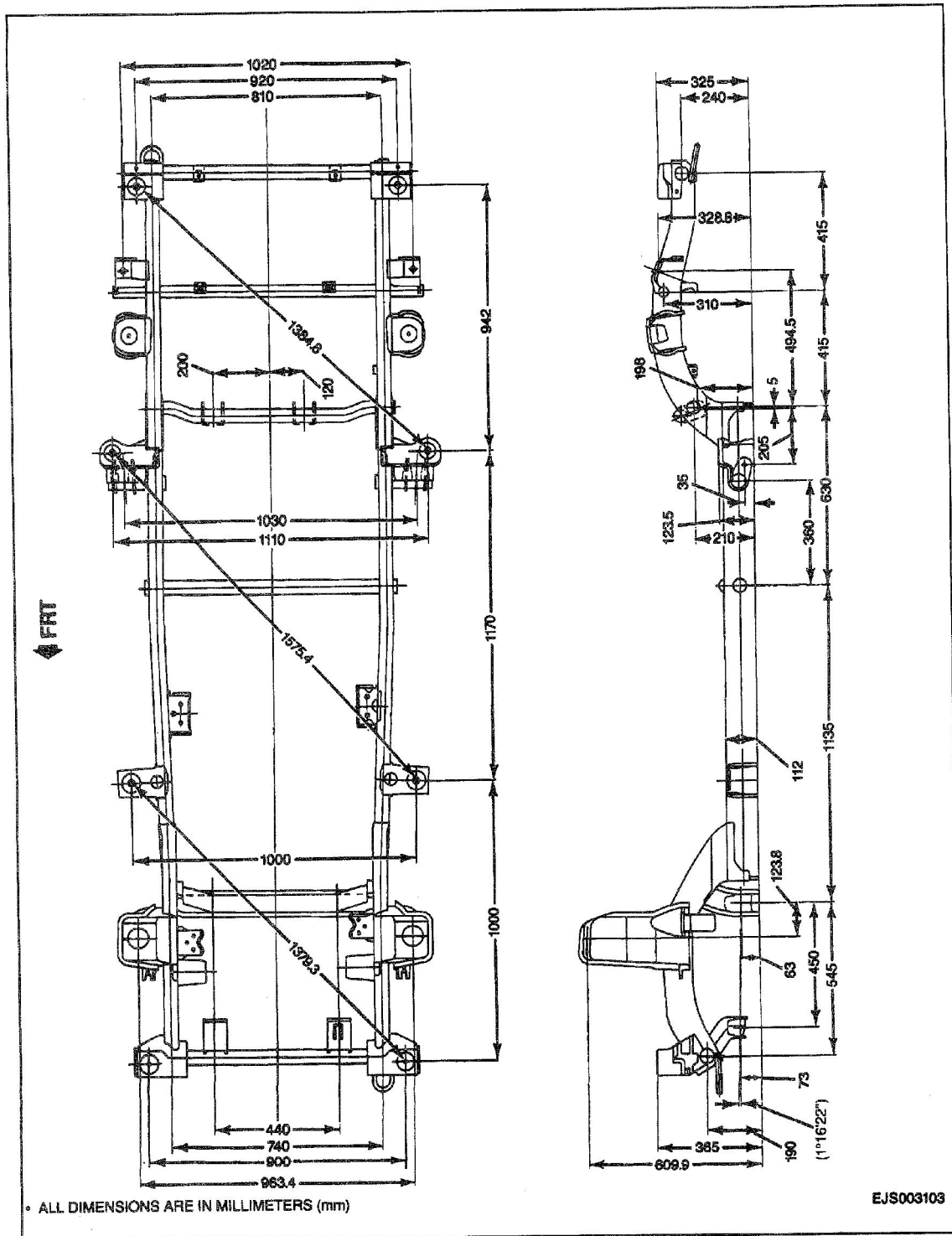
#### FLOOR PAN INSULATOR SHEETS

The floor pan insulator sheets are composed mainly of an asphalt material. The insulator sheets act as a damper to help reduce floor pan vibration. Refer to SECTION 10-10, for more information on floor pan insulator sheets.

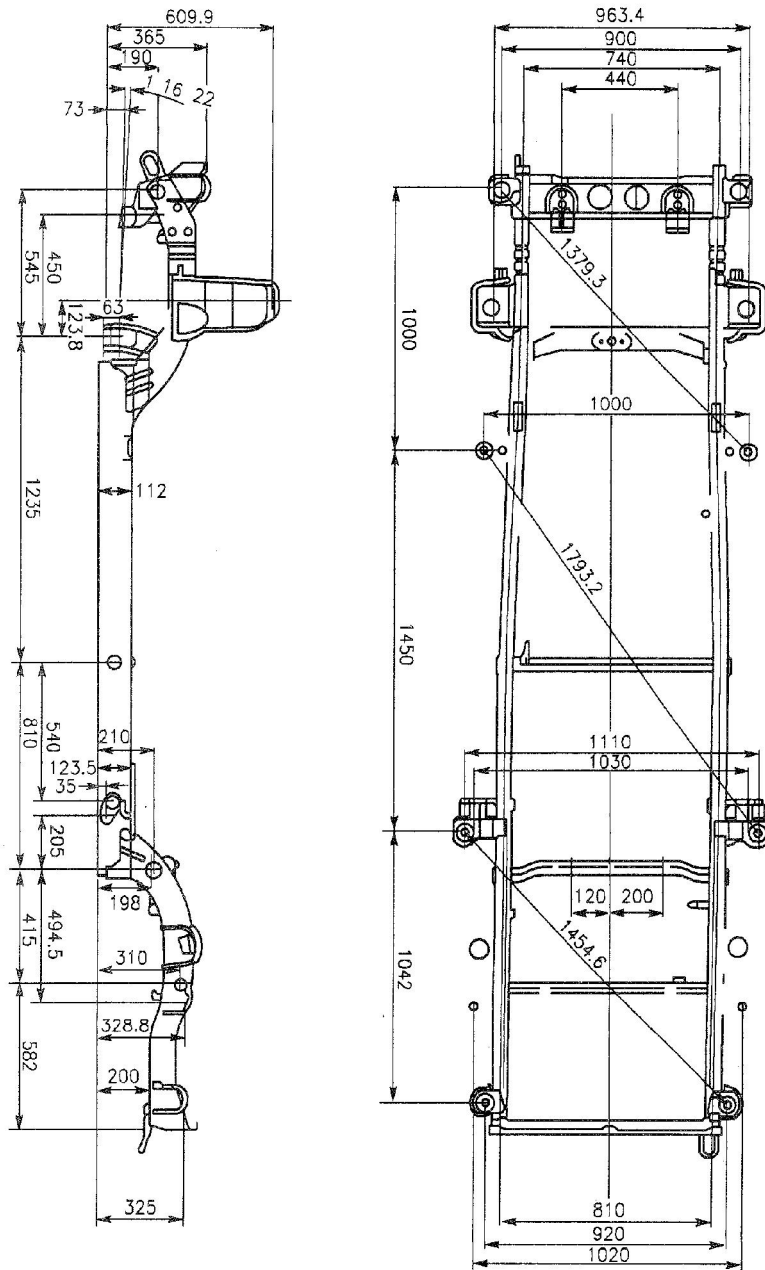
### UNDERBODY DIMENSIONS

#### *Figures 1 through 6*

Refer to Figures 1 through 6 for underbody dimension measurements. Each underbody component affects the strength of the vehicle itself as well as the wheel alignment (toe-in, camber, caster). It is essential, therefore, to inspect the underbody carefully after completing any underbody repairs (welding, etc.). When damage is found in sealing or rustproofing treatment, it is essential that the problem be corrected properly. Refer to SECTION 10-1 for sealing and rustproofing treatment information.



# 10-3-4 UNDERBODY



• ALL DIMENSIONS ARE IN MILLIMETERS (mm)

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Figure 2—Underbody Dimensions—Four -Door Models

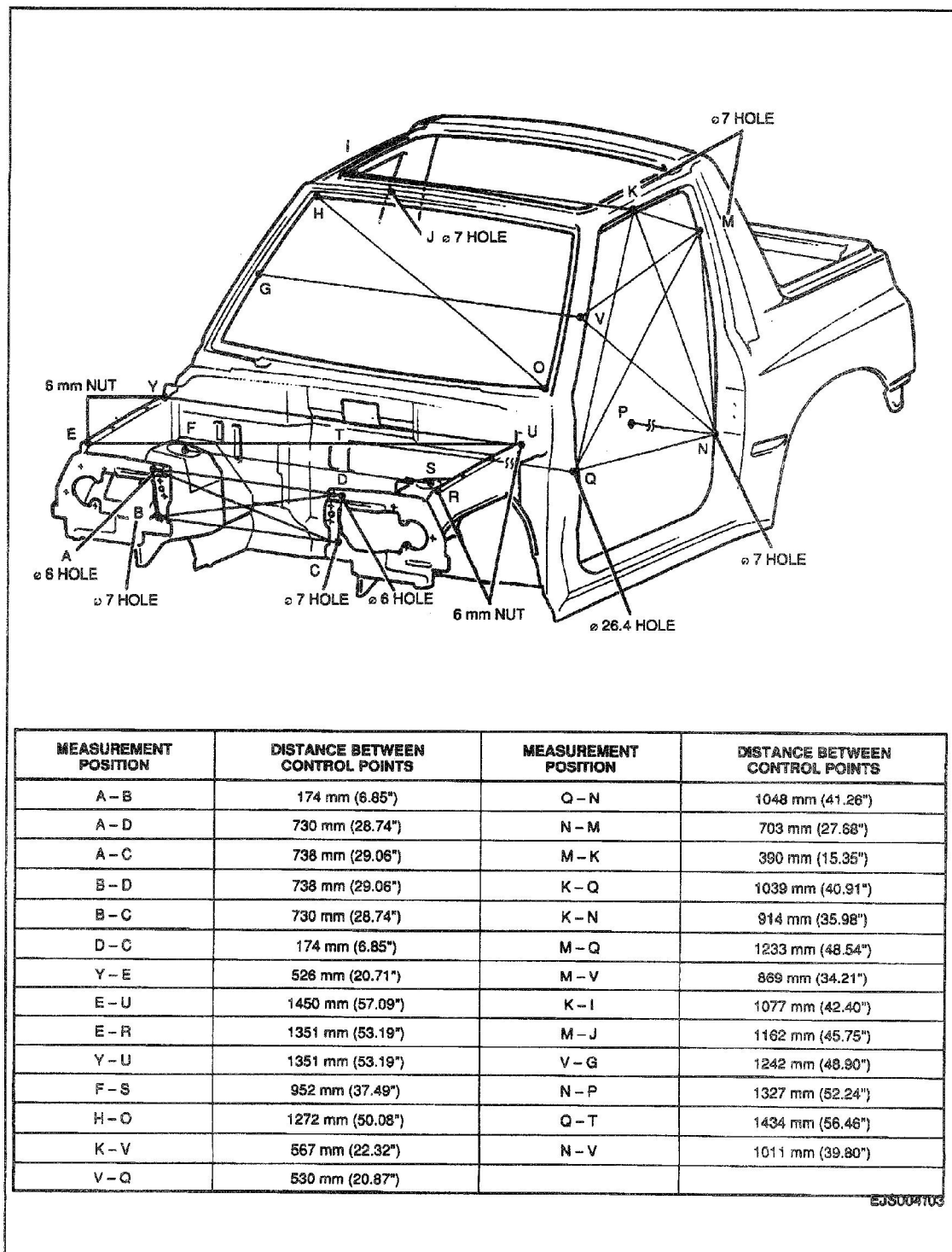


Figure 3—Body Dimensions—Two - Door Models ( 1 of 2 )

# 10-3-6 UNDERBODY

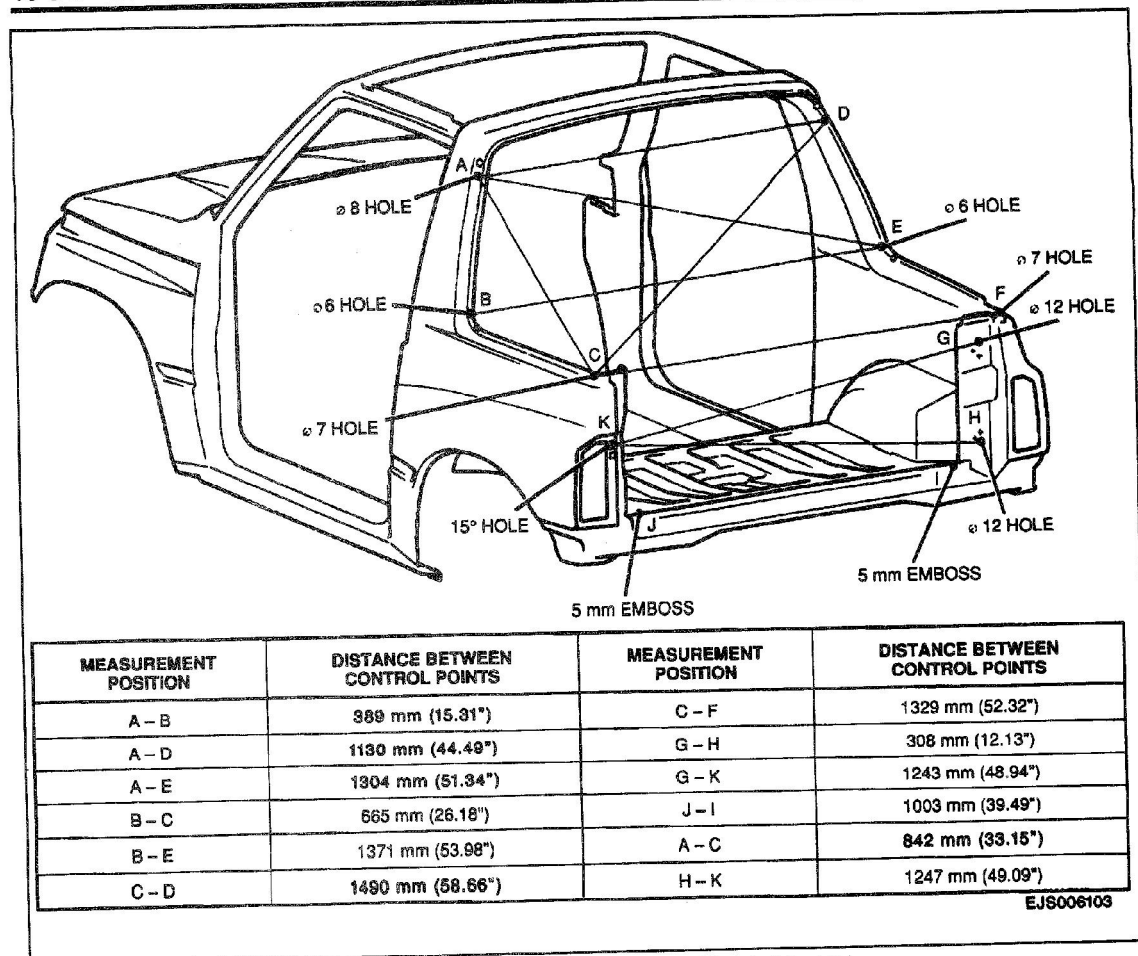


Figure 4—Body Dimensions—Two - Door Models ( 2 of 2 )

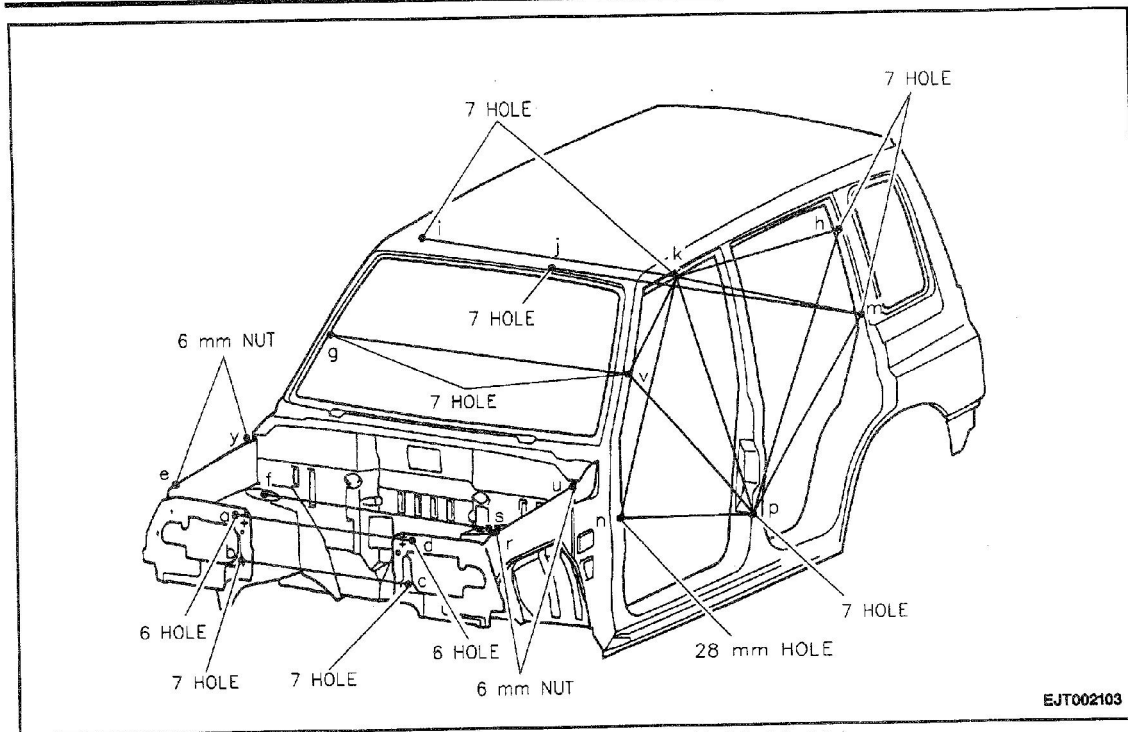


Figure 5—Body Dimensions—Four - Door Models ( 1 of 2 )

## Body Dimensions — Four - Door Models (1 of 2)

MEASUREMENT POSITION	DISTANCE BETWEEN CONTROL POINTS	MEASUREMENT POSITION	DISTANCE BETWEEN CONTROL POINTS
a - b	174 mm (6.85 in.)	k - i	1,070 mm (42.1 in.)
a - d	730 mm (28.74 in.)	k - h	1,124 mm (44.3 in.)
a - c	738 mm (29.06 in.)	k - m	1,205 mm (47.4 in.)
b - d	738 mm (29.06 in.)	k - p	1,027 mm (40.4 in.)
b - c	730 mm (28.74 in.)	m - j	1,301 mm (51.2 in.)
d - c	174 mm (6.85 in.)	m - p	989 mm (38.9 in.)
y - e	526 mm (20.71 in.)	v - g	1,242 mm (48.9 in.)
e - u	1,450 mm (57.09 in.)	v - k	564 mm (22.2 in.)
e - r	1,351 mm (53.19 in.)	v - p	1,098 mm (43.2 in.)
y - u	1,351 mm (53.19 in.)	n - k	1,041 mm (41.0 in.)
f - u	952 mm (37.49 in.)	p - h	1,183 mm (46.6 in.)

## 10-3-8 UNDERBODY

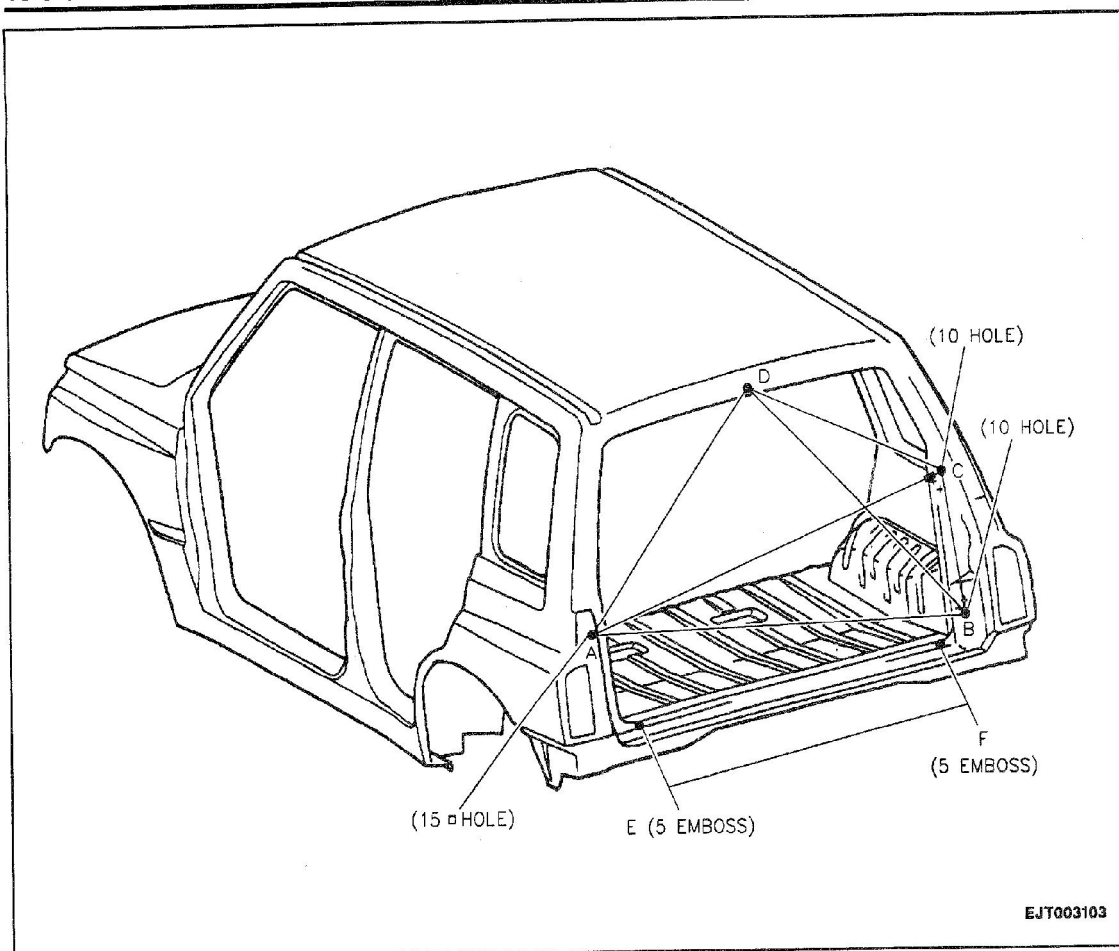


Figure 6—Body Dimensions—Four - Door Models ( 2 of 2 )

### Body Dimensions—Four-Door Models (2 of 2)

MEASUREMENT POSITION	DISTANCE BETWEEN CONTROL POINTS
A - B	1,256 mm (49.45 in.)
B - C	429 mm (16.89 in.)
C - D	702 mm (27.64 in.)
D - A	876 mm (34.49 in.)
D - B	1,013 mm (39.88 in.)
A - C	1,238 mm (48.74 in.)
E - F	1,003 mm (39.49 in.)