

# FRAME AND BUMPERS

## CONTENTS

	page		page
BUMPERS .....	1	FRAME .....	5

## BUMPERS

### INDEX

	page		page
<b>REMOVAL AND INSTALLATION</b>		<b>REAR BUMPER</b> .....	3
FRONT BUMPER .....	1	REAR BUMPER END CAP .....	2
FRONT BUMPER END CAP .....	1	REAR TOW HOOK .....	4
FRONT TOW HOOK .....	2		

### REMOVAL AND INSTALLATION

#### FRONT BUMPER END CAP

##### REMOVAL

- (1) Remove the rivet attaching the end cap to the air deflector.
- (2) Remove the bolts and nuts attaching the end cap to the bumper (Fig. 1).
- (3) Pull back the wheelhouse liner and remove the screws attaching the end cap to the front fender.
- (4) Lifting the end cap from the bottom, tilt slightly upward and slide it outward to disengage the retainer tab from the bumper (Fig. 2).
- (5) Separate the end cap from the bumper.

##### INSTALLATION

- (1) Position the end cap on the bumper and engage the retaining tab.
- (2) Install the screws attaching the end cap to the front fender.
- (3) Install the bolts attaching the end cap to the bumper. Tighten the nut to 9 N·m (7 ft. lbs.) torque.
- (4) Install the rivet attaching the end cap to air deflector.

### FRONT BUMPER

##### REMOVAL

- (1) Remove bumper end caps.
- (2) If equipped, disengage fog lamp wire harness connectors.
- (3) Disconnect vacuum line from reservoir (Fig. 3).
- (4) Remove Torx-head bolts that attach bumper to mounting brackets (Fig. 1).
- (5) Remove bumper from vehicle.
- (6) If necessary, remove bolts attaching bumper mounting brackets to frame.

##### INSTALLATION

- (1) If removed, install bolts attaching bumper mounting brackets to frame. Tighten bolts to 55 N·m (41 ft. lbs.) torque.
- (2) Position bumper on front of vehicle.
- (3) Install Torx-head bolts that attach bumper to mounting brackets. Tighten bolts to 55 N·m (41 ft. lbs.) torque.
- (4) Connect vacuum line to reservoir.
- (5) If equipped, engage fog lamp wire harness connectors.
- (6) Install bumper end caps.

## REMOVAL AND INSTALLATION (Continued)

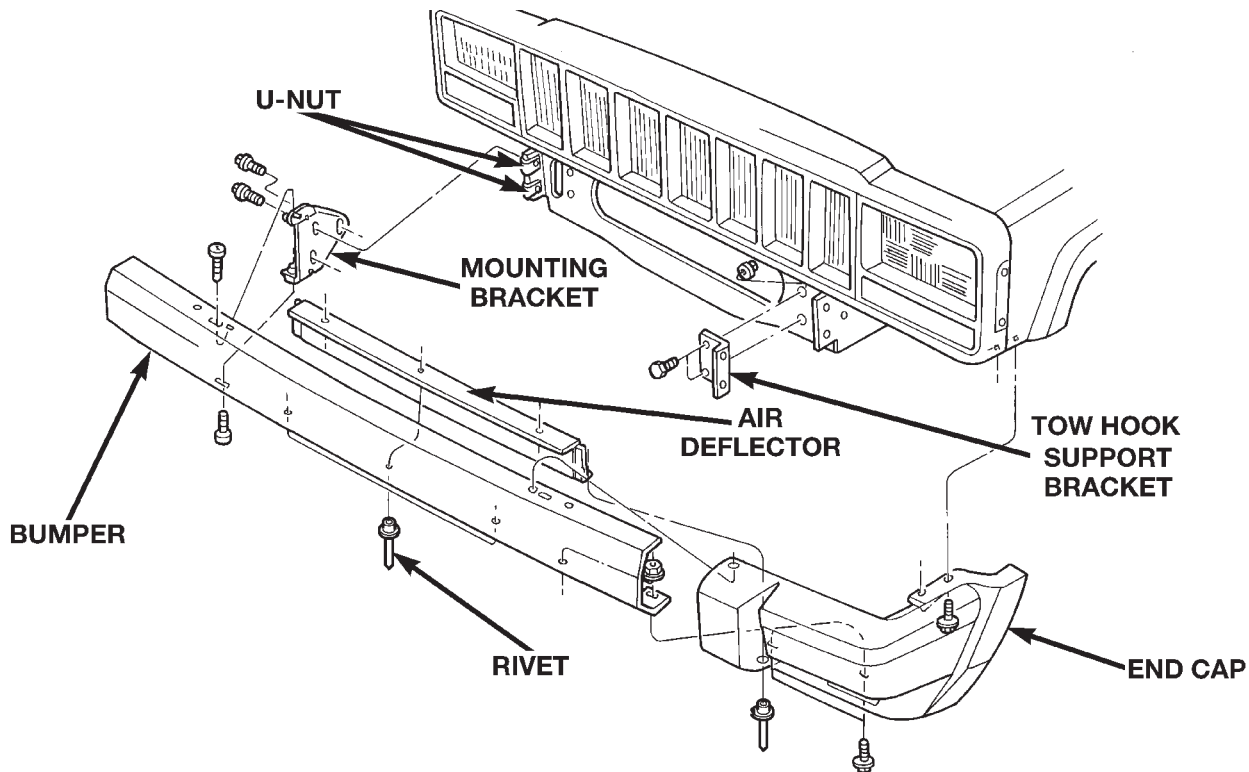


Fig. 1 Front Bumper

80b3b136

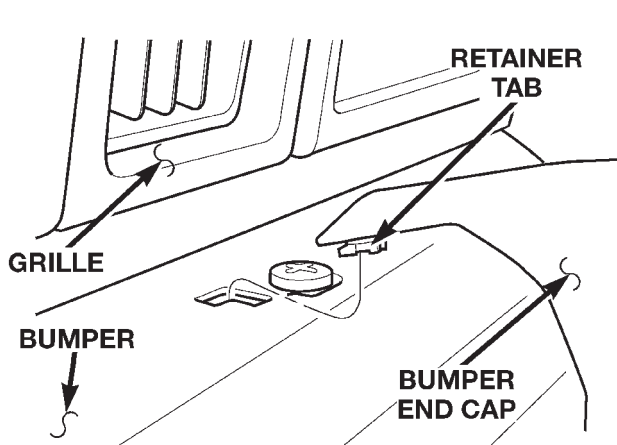


Fig. 2 Bumper End Cap

80aafb09

## FRONT TOW HOOK

## REMOVAL

- (1) Remove bolts attaching tow hook to tow hook reinforcement (Fig. 4).
- (2) Separate tow hook from reinforcement.
- (3) If necessary, remove bolt attaching tow hook reinforcement to frame.

## INSTALLATION

- (1) If removed, install bolt attaching tow hook reinforcement to frame. Tighten bolt to 30 N·m (22 ft. lbs.) torque.
- (2) Position tow hook on reinforcement.

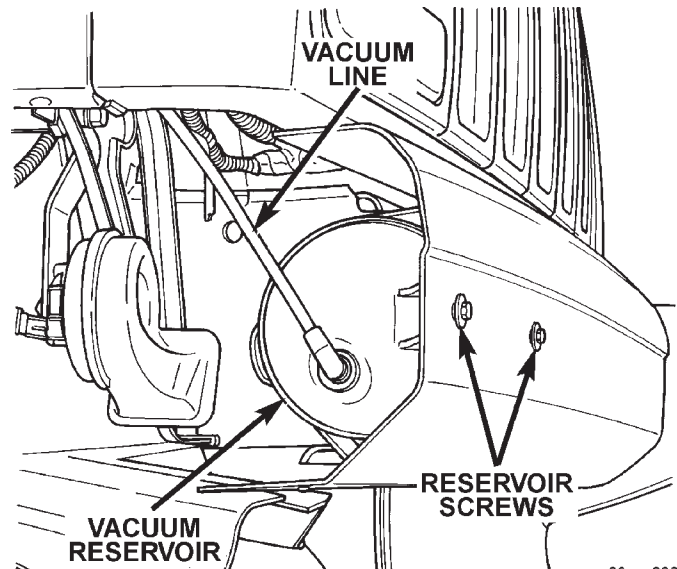


Fig. 3 Vacuum Reservoir

80aac282

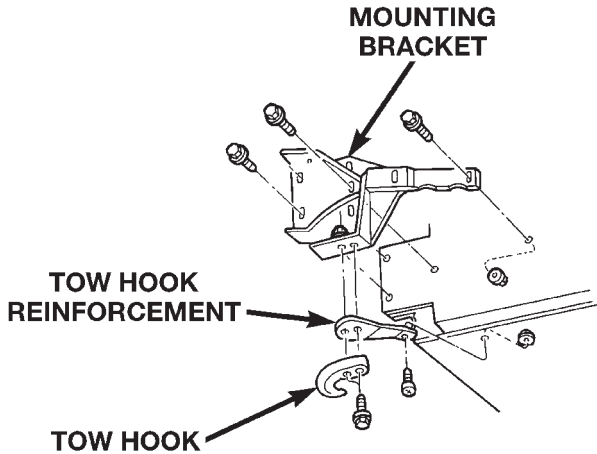
- (3) Install bolts attaching tow hook to tow hook reinforcement. Tighten bolts to 100 N·m (74 ft. lbs.) torque.

## REAR BUMPER END CAP

## REMOVAL

- (1) Remove the bolts and nuts attaching the underside of the end cap to the bumper (Fig. 5).
- (2) Remove the screw attaching the front of the end cap to the underside of the quarter panel.

REMOVAL AND INSTALLATION (Continued)



80b3b131

**Fig. 4 Front Tow Hook**

(3) Lift the end cap slightly upward and slide it rearward to release it from the retainer.

(4) Separate the end cap from the vehicle.

**INSTALLATION**

(1) Position the end cap on the rear of the retainer and the outer edge of the bumper.

(2) Slide the end cap forward onto the retainer. Ensure the end cap overlaps the lip of the rear wheelhouse liner.

(3) Install the screw attaching the front of the end cap to the underside of the quarter panel.

(4) Install the bolts and nuts attaching the underside of the end cap to the bumper.

**REAR BUMPER**

**REMOVAL**

(1) For vehicles equipped with a trailer hitch, remove hitch before removing bumper. If necessary, refer to removal procedure within Group 13, Frame and Bumpers.

(2) Remove bumper end caps.

(3) Remove upper nuts that attach bumper to bumper support brackets (Fig. 5).

(4) Remove lower bolts that attach bumper to bumper support brackets.

(5) Remove bumper from vehicle.

(6) If necessary, remove bumper support brackets from the rear sill.

**INSTALLATION**

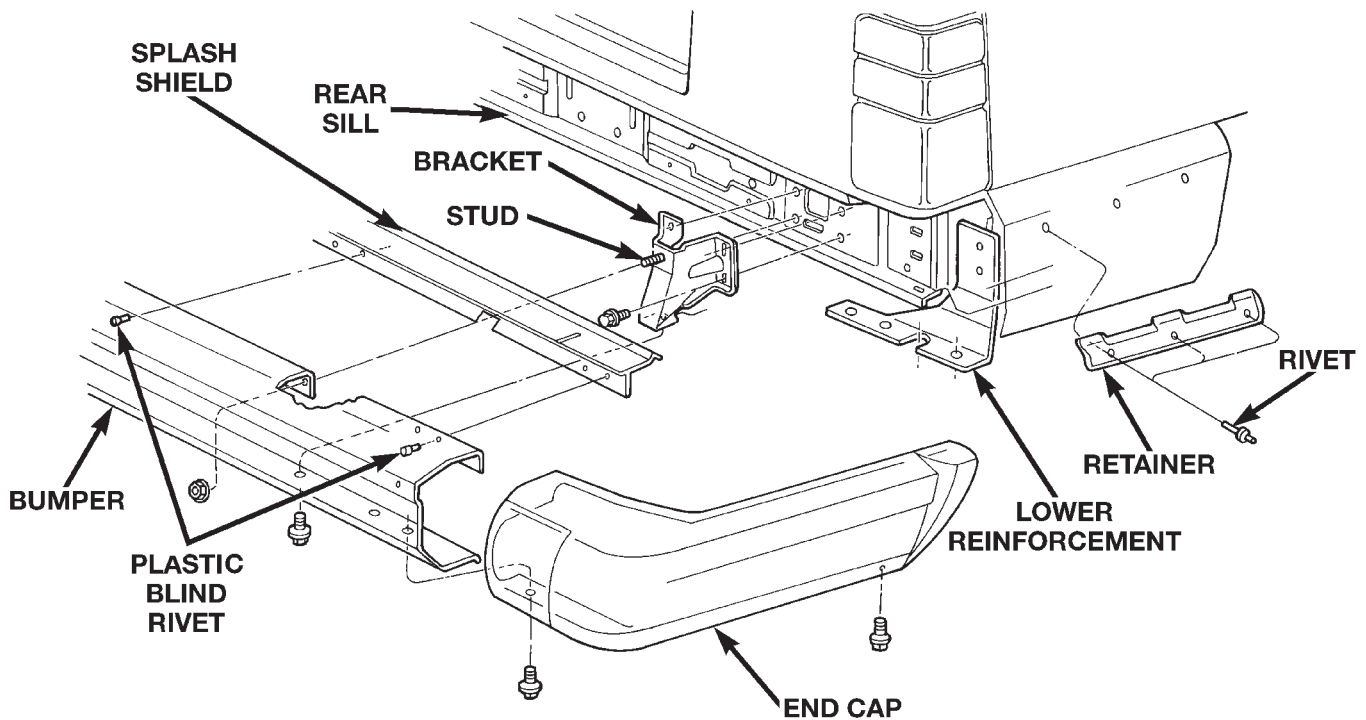
(1) If removed, install bumper support brackets on the rear sill. Tighten bolts to 55 N·m (41 ft. lbs.) torque.

(2) Position bumper on support brackets.

(3) Install bolts that attach bumper to bumper support brackets. Tighten nuts to 55 N·m (41 ft. lbs.) torque.

(4) Install bumper end caps.

(5) If removed, install trailer hitch.



**Fig. 5 Rear Bumper**

80b3b137

## REMOVAL AND INSTALLATION (Continued)

## REAR TOW HOOK

## REMOVAL

- (1) Remove bolts that attach tow hook bracket and tow hook to frame rail (Fig. 6).
- (2) Remove bracket and tow hook from frame rail.

## INSTALLATION

- (1) Position bracket and tow hook on frame rail.
- (2) Install bolts that attach tow hook bracket and tow hook to frame rail. Tighten bolts to 94 N·m (70 ft. lbs.) torque.

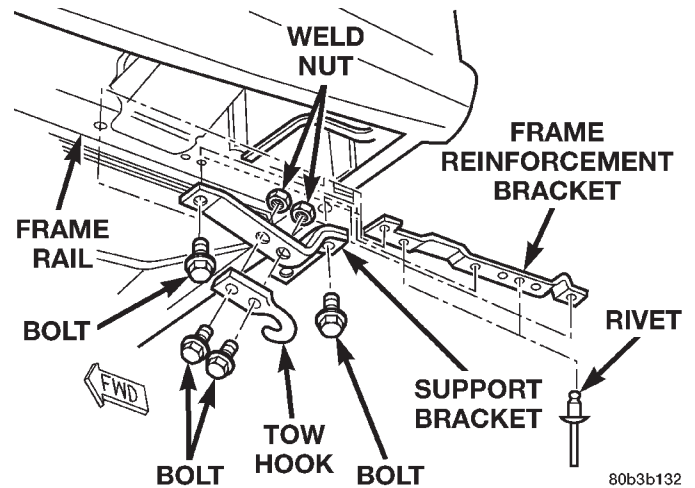


Fig. 6 Rear Tow Hook

# FRAME

## INDEX

	page		page
<b>REMOVAL AND INSTALLATION</b>		<b>TRANSFER CASE SKID PLATE</b> .....	5
FRONT SKID PLATE .....	5	<b>SPECIFICATIONS</b>	
FUEL TANK SKID PLATE .....	5	FRAME DIMENSIONS .....	6
TRAILER HITCH .....	6	FRAME TORQUE SPECIFICATIONS .....	8

## REMOVAL AND INSTALLATION

### FRONT SKID PLATE

#### REMOVAL

- (1) Remove the screws that attach skid plate to side sills.
- (2) Remove the nuts that attach the skid plate to the crossmember (Fig. 1).
- (3) Remove the skid plate from the vehicle.

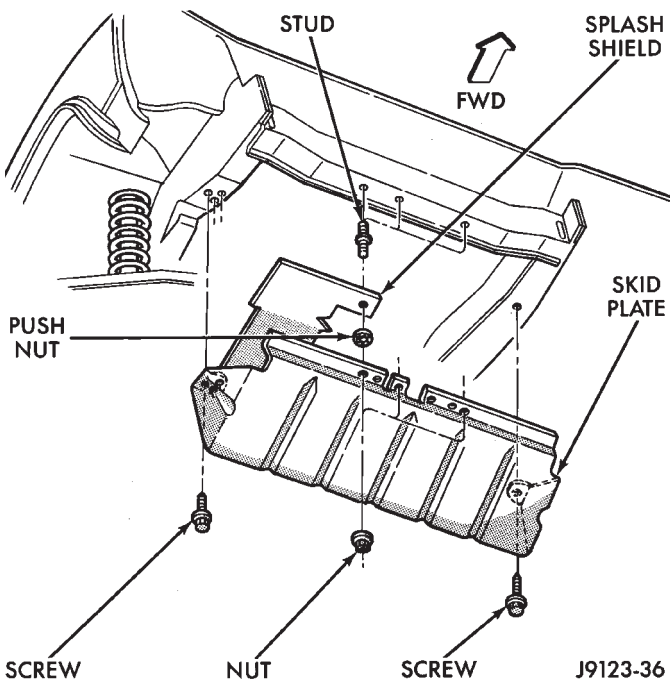


Fig. 1 Front Skid Plate

#### INSTALLATION

- (1) Position the skid plate at front crossmember and side sills.
- (2) Install the nuts to attach the skid plate to crossmember.
- (3) Install the screws to attach skid plate to side sills.

### TRANSFER CASE SKID PLATE

#### REMOVAL

- (1) Support skid plate.
- (2) Remove bolts that attach skid plate to transmission support crossmember and frame sill (Fig. 2).
- (3) Remove support and skid plate from vehicle.

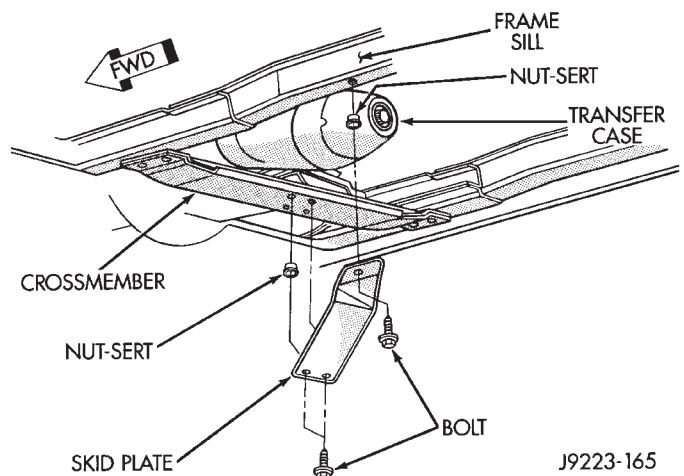


Fig. 2 Transfer Case Skid Plate

#### INSTALLATION

- (1) Position and support skid plate at frame sill and transmission support crossmember.
- (2) Attach skid plate to frame sill and crossmember with bolts. Tighten bolts to 22 N·m (16 ft. lbs.) torque.

### FUEL TANK SKID PLATE

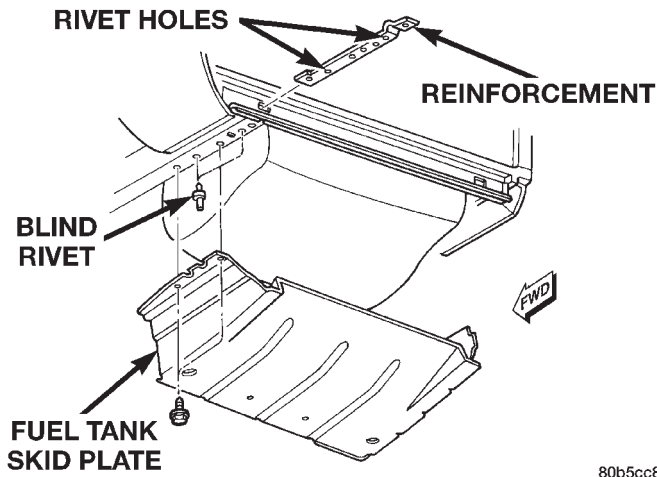
#### REMOVAL

- (1) Position a support under skid plate.
- (2) Remove bolts that attach skid plate to underbody side rails (Fig. 3).
- (3) Remove support and skid plate from vehicle.

#### INSTALLATION

- (1) Position and support skid plate under fuel tank.

## REMOVAL AND INSTALLATION (Continued)



80b5cc86

Fig. 3 Fuel Tank Skid Plate

(2) Install bolts to attach skid plate to underbody rails. Tighten bolts to 74 N·m (55 ft. lbs.) torque.

(3) Remove support from under skid plate.

## TRAILER HITCH

## REMOVAL

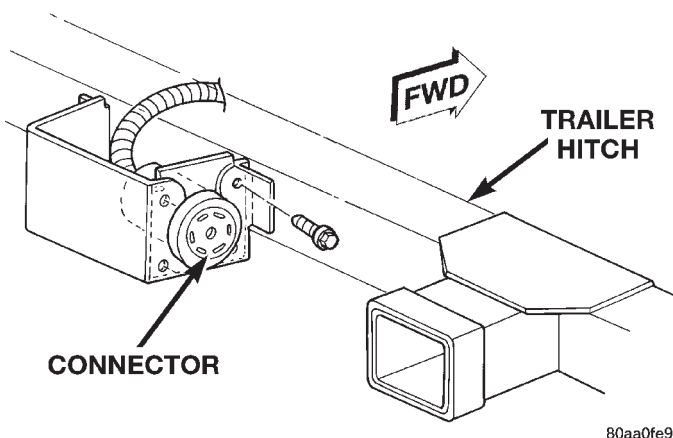
(1) If necessary, remove the trailer tow wire harness connector from the hitch (Fig. 4).

(2) Support the hitch.

(3) Remove the bolts that attach the trailer hitch to the frame sills and reinforcement brackets (Fig. 5).

(4) If equipped, remove the fuel tank skid plate.

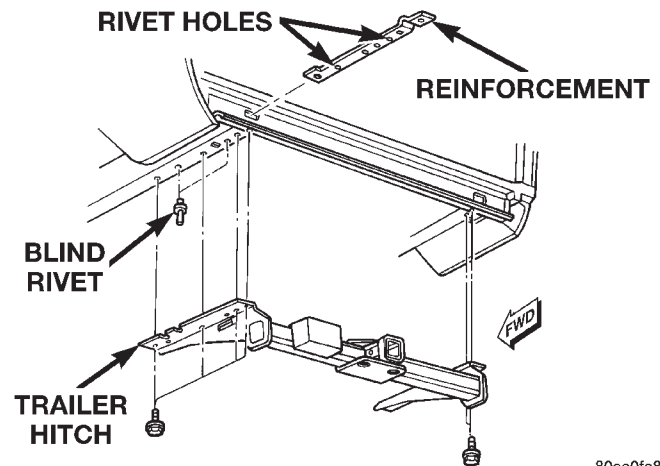
**NOTE:** The reinforcement brackets are held on the frame sills with two blind rivets.



80aa0fe9

Fig. 4 Trailer Hitch Harness Connector

## INSTALLATION



80aa0fe8

Fig. 5 Trailer Hitch

(1) Install frame reinforcement brackets, if removed. Slide the brackets through the vehicle rear sill openings and attach to the frame sills with blind rivets.

(2) Using an adequate lifting device, position hitch at the proper location for installation on vehicle and support it.

(3) If equipped, position fuel tank skid plate on vehicle frame sills.

(4) Loosely install the bolts to attach the trailer hitch (and the skid plate) to frame sills and reinforcement brackets.

(5) Tighten all bolts/nuts to 74 N·m (55 ft. lbs.) torque.

(6) Remove the lift/support.

(7) If removed, attach the trailer wire harness connector to the hitch.

## SPECIFICATIONS

## FRAME DIMENSIONS

Frame dimensions are listed in millimeter scale. All dimensions are from center to center of Principal Locating Point (PLP), or from center to center of PLP and fastener location (Fig. 6).

SPECIFICATIONS (Continued)

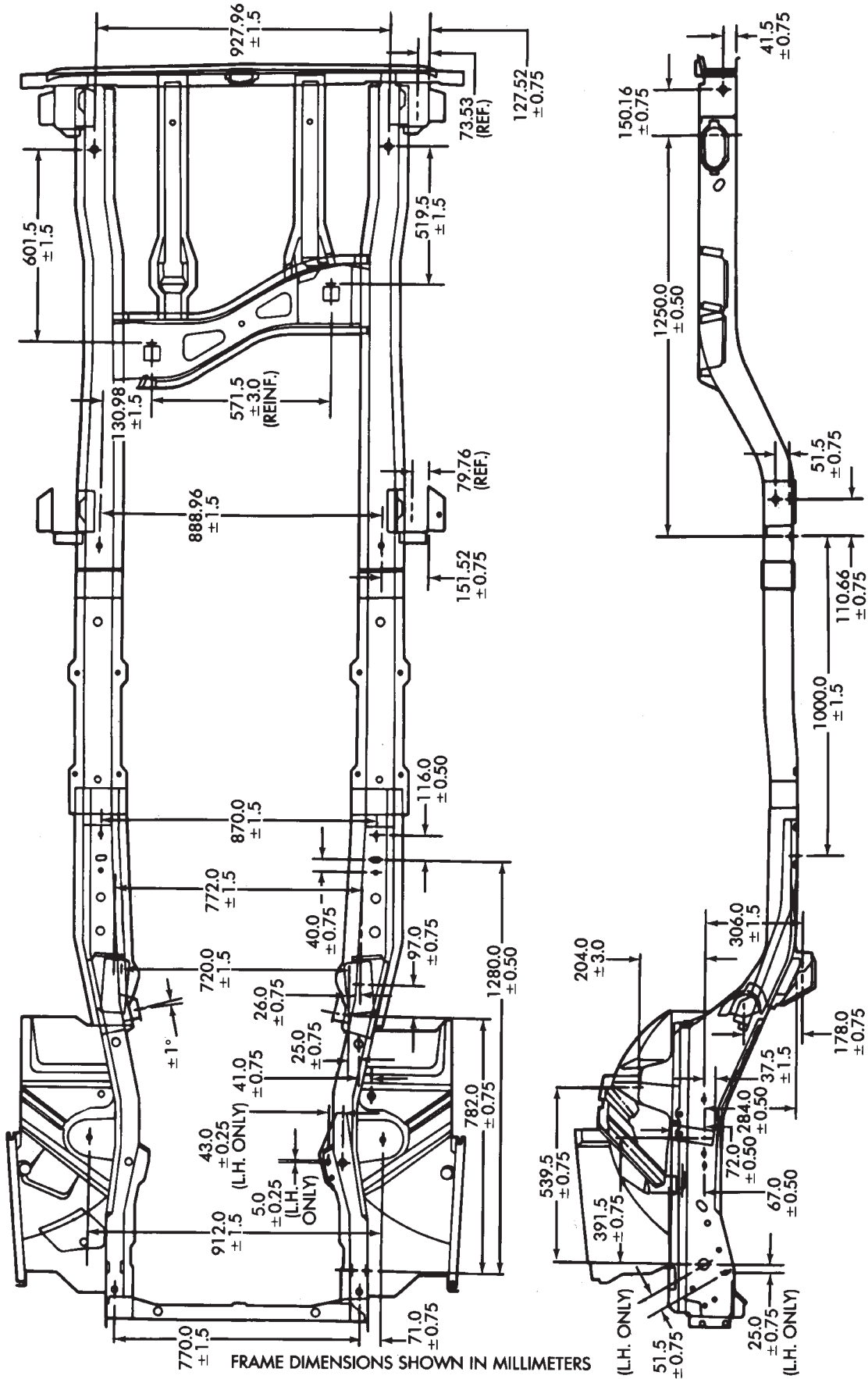


Fig. 6 Frame Dimensions



## SPECIFICATIONS (Continued)

## FRAME TORQUE SPECIFICATIONS

<b>DESCRIPTION</b>	<b>TORQUE</b>
Front Skid Plate Screw . . . . .	42 N·m (31 ft. lbs.)
Front Skid Plate Nut . . . . .	17 N·m (125 in. lbs.)
Transfer Case Skid Plate Bolt . . . . .	22 N·m (16 ft. lbs.)
Fuel Tank Skid Plate Bolt . . . . .	74 N·m (55 ft. lbs.)
Front Bumper End Cap to Mounting Bracket Nut . . . . .	9 N·m (7 ft. lbs.)
Front Bumper Mounting Bracket to Frame Bolt . . . . .	55 N·m (41 ft. lbs.)
Front Bumper to Mounting Bracket Bolt . . . . .	55 N·m (41 ft. lbs.)
Front Tow Hook Bolt . . . . .	100 N·m (74 ft. lbs.)
Front Tow Hook Reinforcement Bolt . . . . .	30 N·m (22 ft. lbs.)
Rear Bumper to Mtg. Bracket Nut . . . . .	55 N·m (41 ft. lbs.)
Rear Bumper Mtg. Bracket to Rear Sill Bolt . . . . .	55 N·m (41 ft. lbs.)
Rear Tow Hook Bolt . . . . .	94 N·m (70 ft. lbs.)
Trailer Tow Reinforcement Brkt Bolt . . . . .	74 N·m (55 ft. lbs.)