

BODY AND FRAME ALIGNMENT

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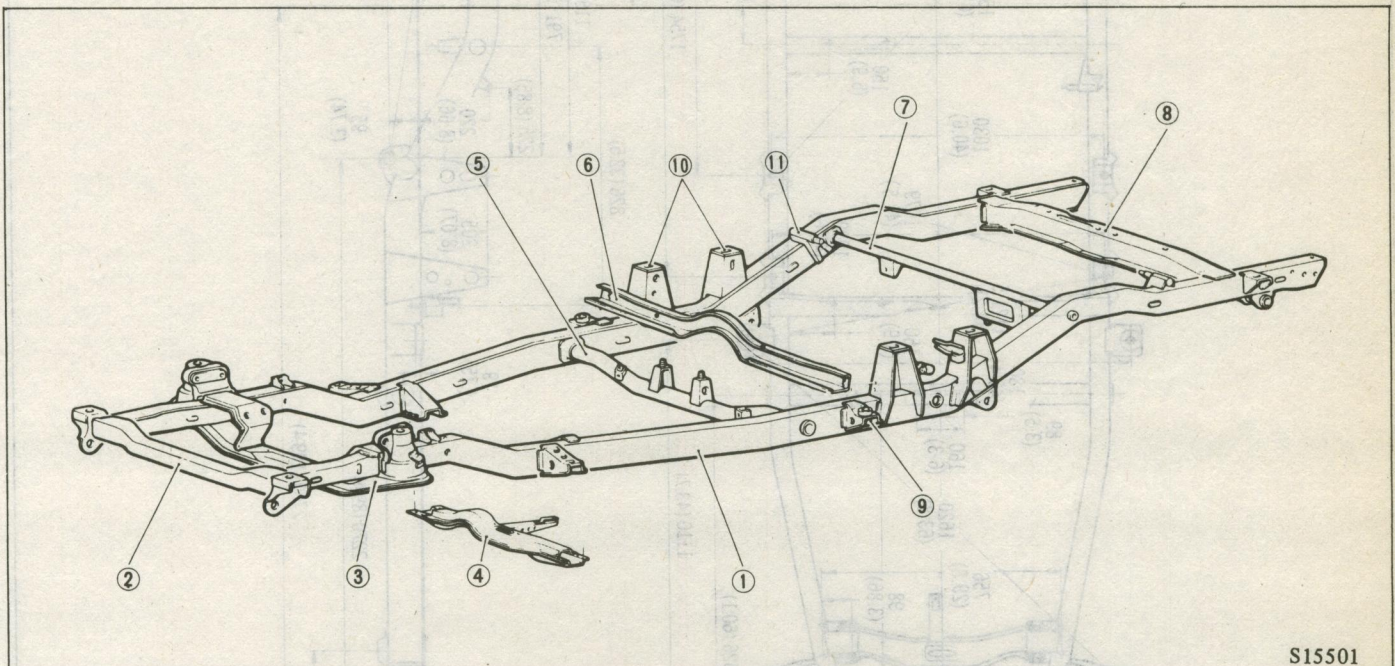
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GENERAL INFORMATION

The frame is a specially important part which sustains the load of the chassis and other vehicle parts as well as road shocks coming from the front and rear wheels. It is a steel ladder-type frame with bending and torsional rigidity great enough to bear all loads and reactions.

The frame is made up of side members and crossmembers to which engine mounts, transmission mounts, cab mounts, front suspension mounts, spring hangers, shackle hangers and rear body mount brackets are welded. (Fig. 1)

FRAME



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- | | |
|-------------------------------|---------------------------------|
| (1) Side member | (7) No.4 crossmember |
| (2) No.1 crossmember | (8) No.5 crossmember |
| (3) Front crossmember | (9) Cab mounting bracket |
| (4) No.2 crossmember | (10) Rear body mounting bracket |
| (5) No.3 crossmember | (11) Shock absorber bracket |
| (6) Fuel tank mounting member | |

Fig. 1 Frame Components

BODY AND FRAME ALIGNMENT

FRAME ALIGNMENT

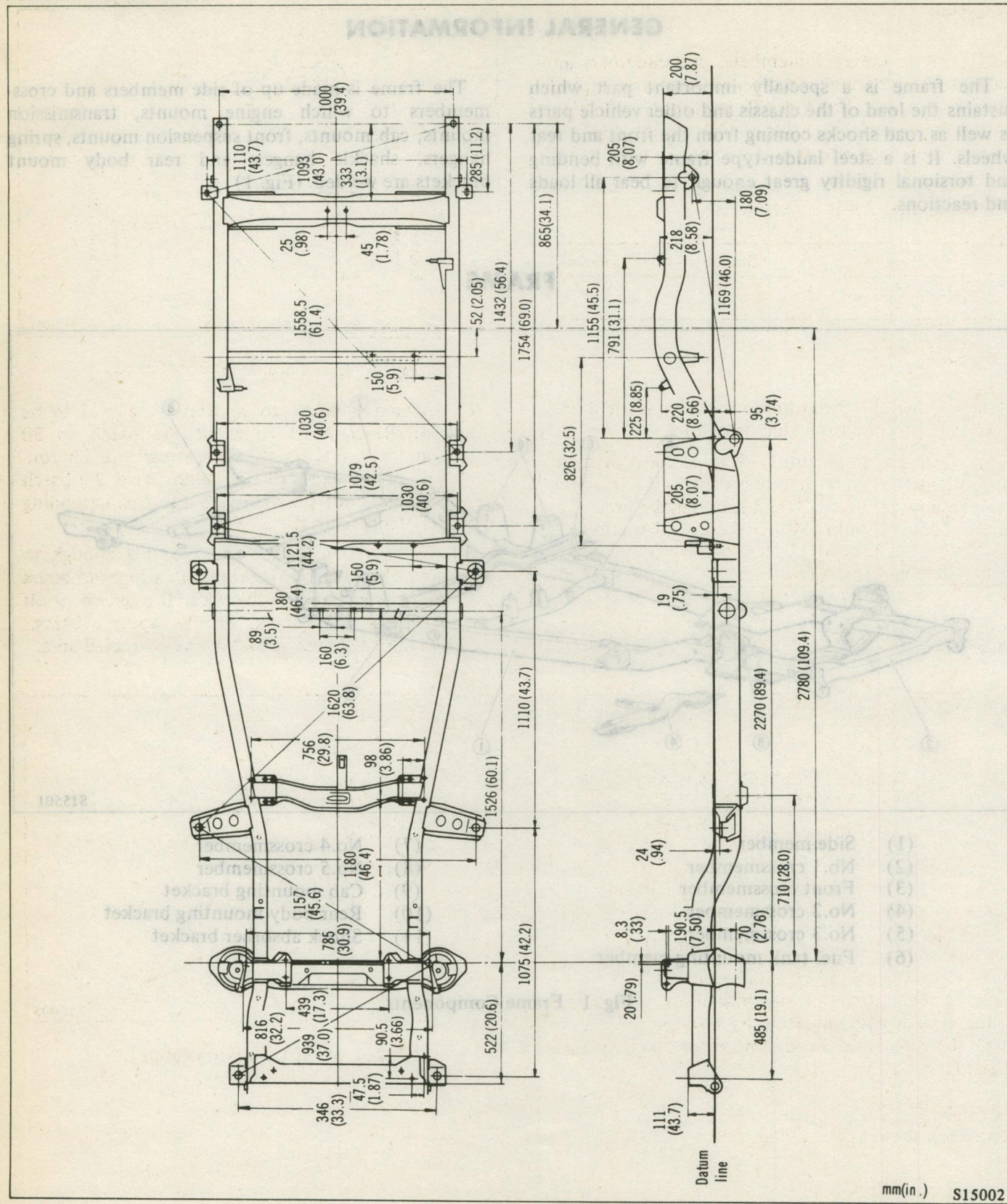


Fig. 2 Frame Alignment

Inspection

(1) Check the side members, crossmembers and brackets for separated or cracked welds by tapping them with a test hammer. If in doubt, polish the weld surface well and check it with a crack detecting agent (Red-check, etc.).

(2) Check the frame for bends and distortion. Correct the frame if it is defective.

Description	Standard value	mm (in.)
Frame distortion	3 (.12) or less	

Correction

When a crack has been found in the frame, it should be corrected by the following procedure.

(1) Drill a 6 to 8 mm (.24 to .32 in.) diameter stop hole at a point 1 to 3 mm (.04 to .12 in.) away from the end of the crack and chamfer the hole edge, using a 10 to 12 mm (.40 to .47 in.) diameter drill. (Fig. 3)

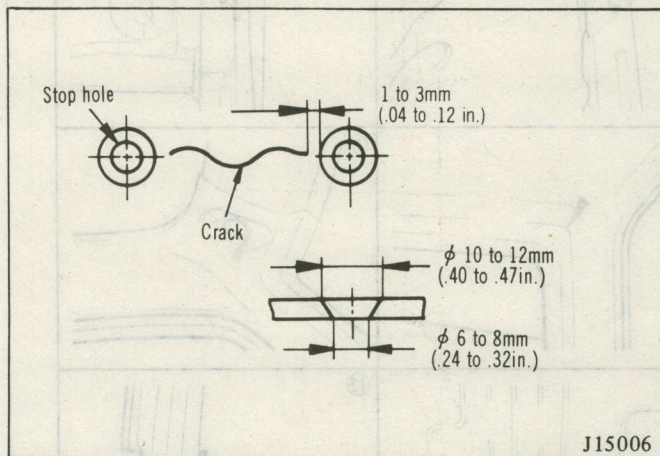


Fig. 3 Crack Repair Procedure (1)

(2) Remove the cracked area, using a chisel or a gouging blowpipe. Fill the chiseled or gouged area and the stop hole completely by two- or three-layer electric welding, and finish the welded area with a grinder. (Fig. 4)

CAUTION:

Gas-welding should be avoided.

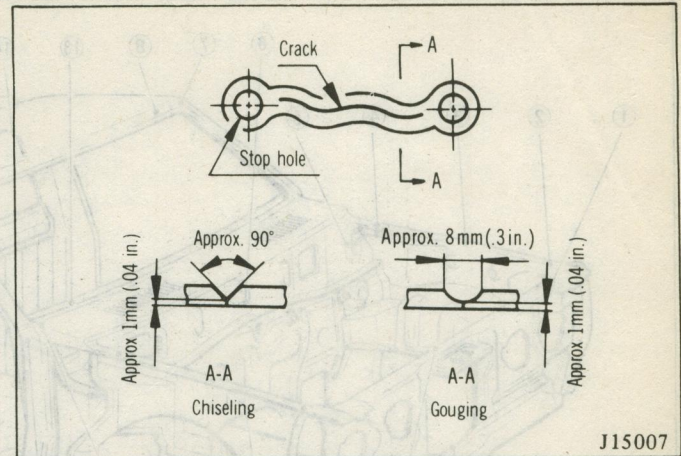


Fig. 4 Crack Repair Procedure (2)

(3) Attach a patch to reinforce the area to be corrected: Bevel both edges of the patch to 30 degree angle or less so that no stress will be concentrated on the edges of the patch. Weld the patch over the edges, but do not weld the area extending 10 mm (.39 in.) from the corners.

(4) Use a patch long enough or big enough to cover even the area of the frame in which no stress will be concentrated: otherwise the patch itself will be subject to a crack. Finally, apply a chassis black to a exposed area as well as the corrected area.

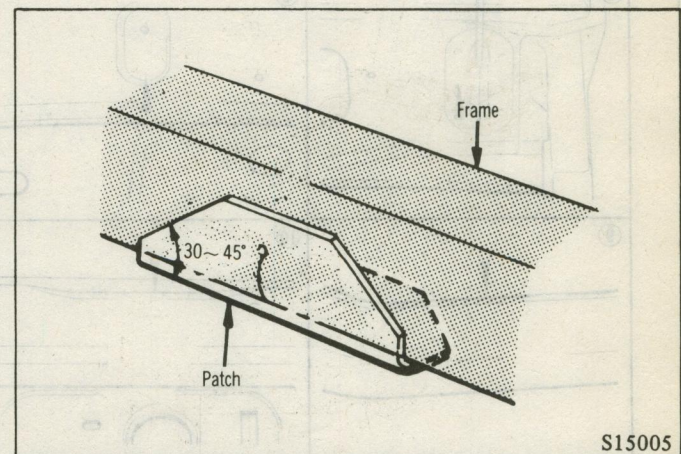


Fig. 5 Installing the Patch

CAB ALIGNMENT

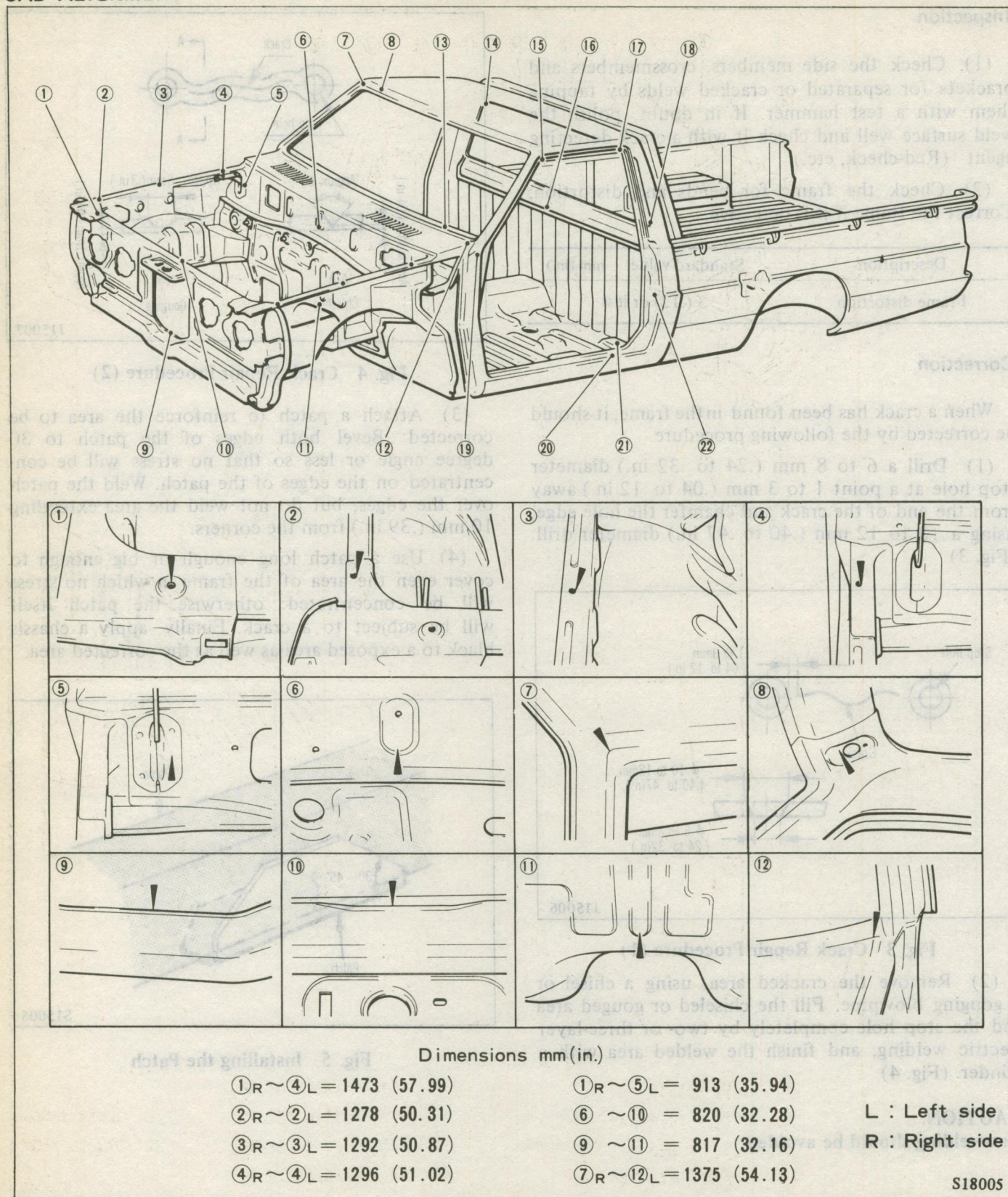
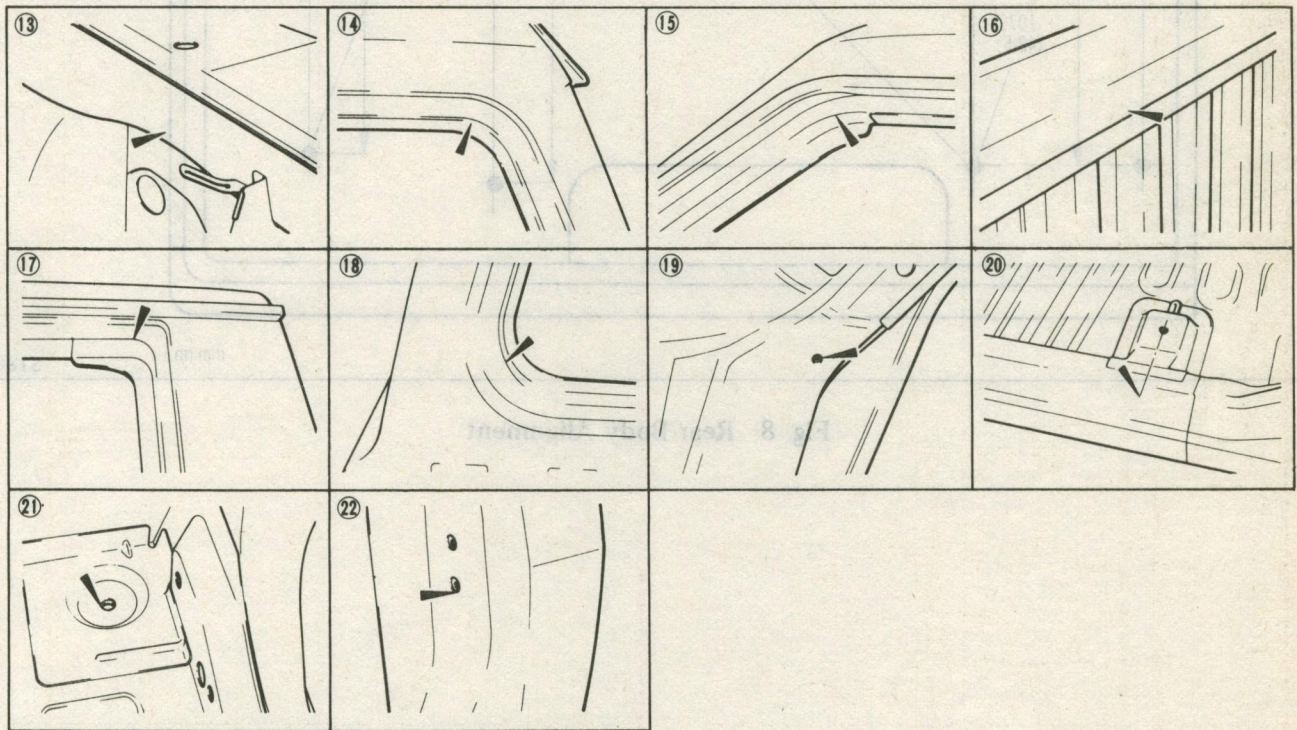
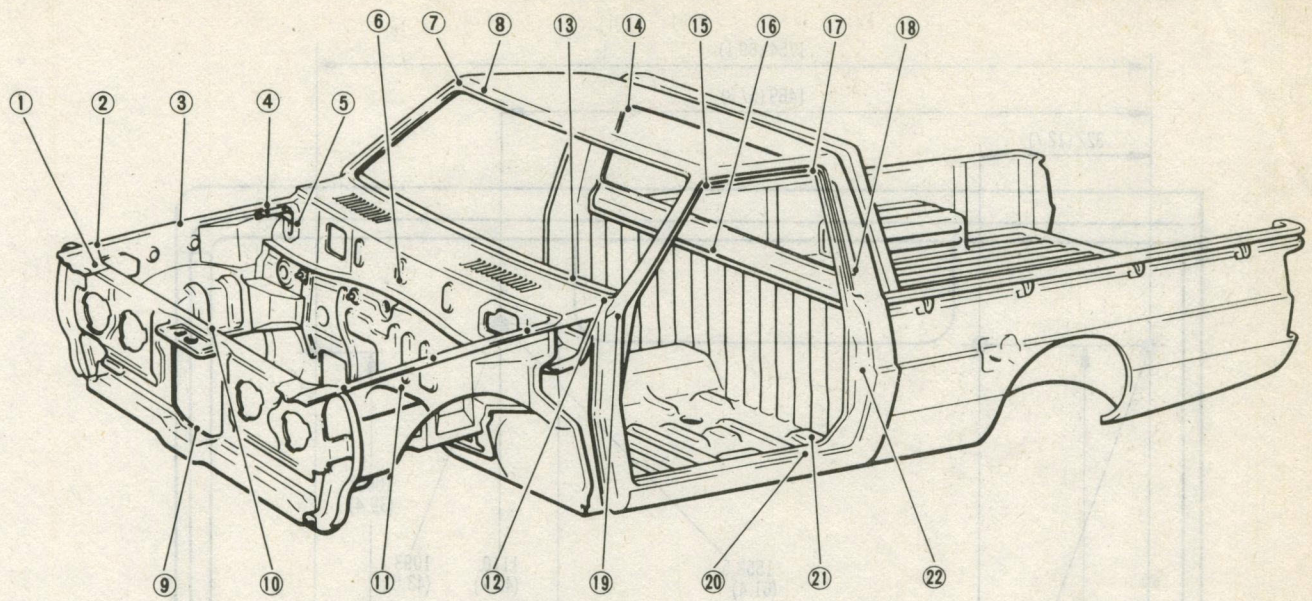


Fig. 6 Cab Alignment (1)



Dimensions mm(in.)

$$20_L \sim 15_L = 1030 \quad (40.55)$$

$$20_L \sim 17_L = 1010 \quad (39.76)$$

$$20_L \sim 19_L = 966 \quad (38.03)$$

$$21_L \sim 8_R = 1644 \quad (64.72)$$

$$16 \sim 13 = 1241 \quad (48.86)$$

$$14_R \sim 18_L = 1644 \quad (64.72)$$

$$19_L \sim 15_L = 1375 \quad (54.13)$$

$$22_L \sim 19_L = 1076 \quad (42.36)$$

L : Left side

R : Right side

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Fig. 7 Cab Alignment (2)

REAR BODY ALIGNMENT

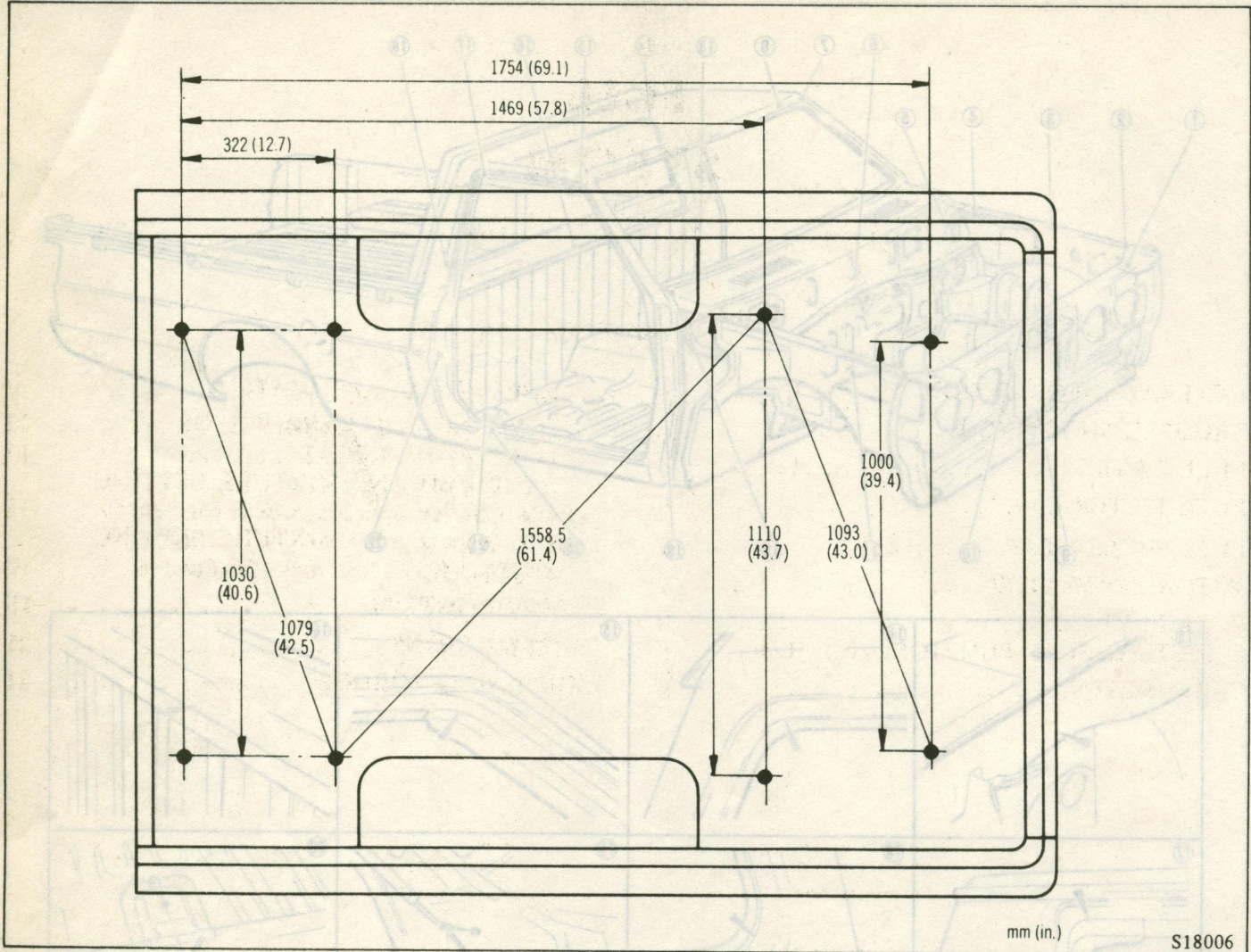


Fig. 8 Rear Body Alignment