

Group 13 FRAME CONTENTS

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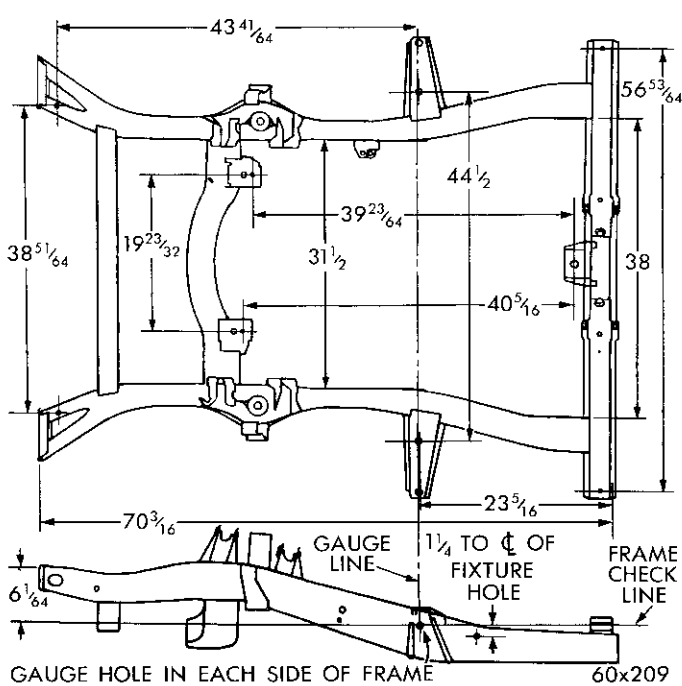


Fig. 1—Frame Dimensions (PS-1, PS-3, PC-1)

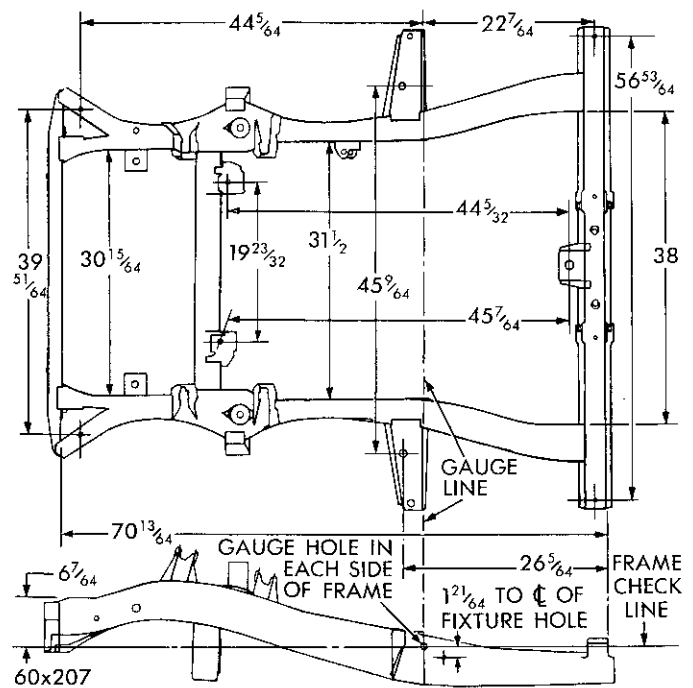


Fig. 2—Frame Dimensions (PC-2, PC-3)

Group 13

FRAME

The stub frame is anchored to the body at ten locations — four at brackets extending down from the cowl panel and six under the front passenger compartment where the frame is joined to the

underbody crossmember. Shimming of the stub frame outriggers, to keep them in alignment with the balance of the frame is performed prior to the body being installed on the frame.

SERVICE PROCEDURES

1. CHECKING FRAME ALIGNMENT

The various frame dimensions shown in Figures 1, 2, 3, 4 and 5 may be used as a guide in checking the frame alignment. Diagonal measurements should be taken when straightening the frame.

Measure the distance between the points connected by line "A", in Figure 5. This distance should agree within $\frac{1}{4}$ inch with the distance between the points connected by line "B".

The diagonals shown in Figure 5 represent only

one of a few that may be checked. Many other diagonals may be measured in the same way.

NOTE: Care should be taken to make sure that any two diagonals compared represent exactly corresponding points on each side of the frame.

Minor frame alignment can usually be corrected by straightening the frame parts which have been bent, although a badly distorted frame can in most cases be replaced more economically than by attempting repairs.

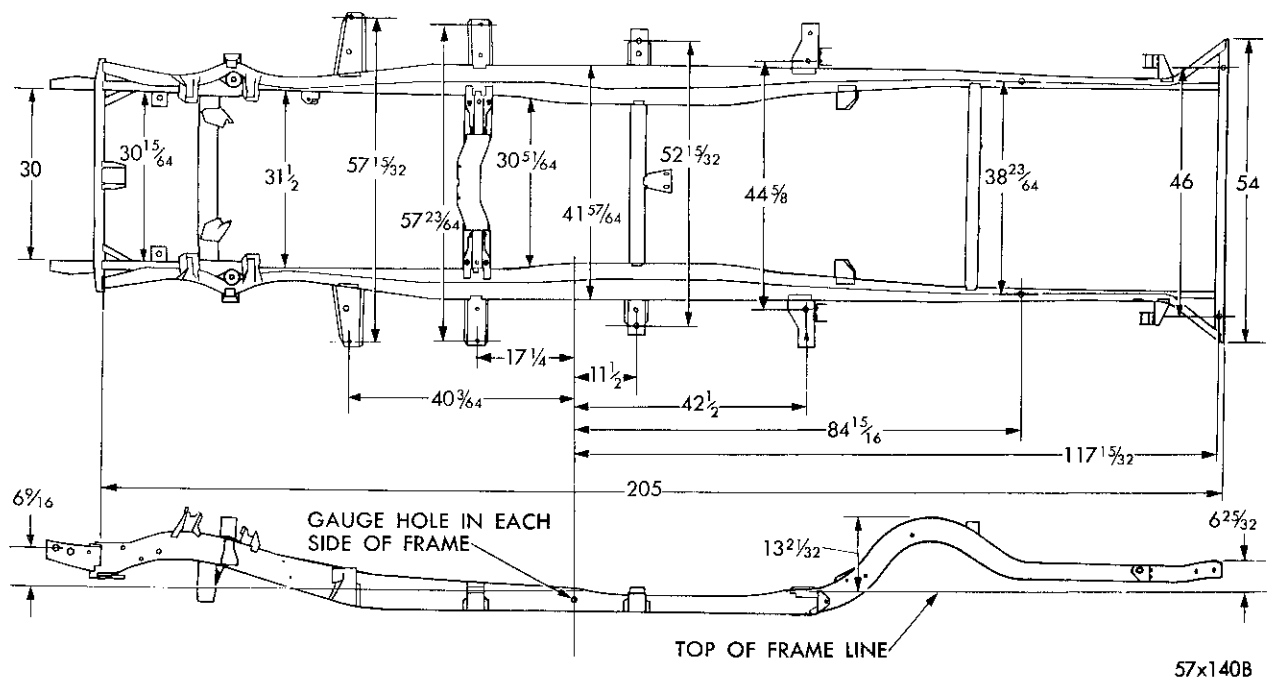


Fig. 3—Frame Dimensions (PY-1)

57x140B

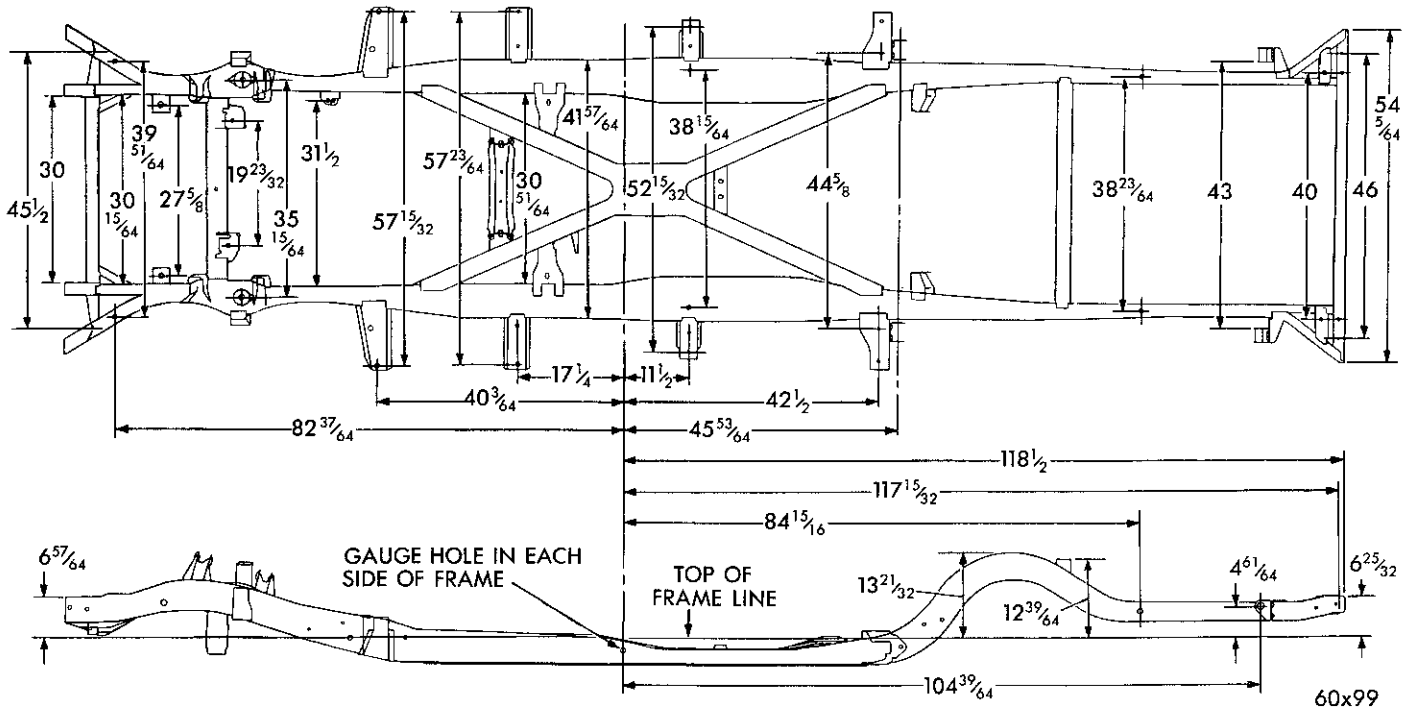


Fig. 4—Frame Dimensions (PY-1 Convertible)

2. FRAME REPLACEMENT

a. Removal

- (1) Drain the radiator and remove the battery.
- (2) Remove the front bumper and the hood assembly.
- (3) Disconnect the radiator hoses from the radiator, the heater hoses, the hood latch cable at the latch, the head lamp wires and the horn wires.

(4) Remove the hood hinge to the fender mounting screws (1 each side).

(5) Remove the screws attaching the voltage regulator, horn relay or starter solenoid from the fender splash shields.

(6) Remove the upper nuts and studs (two at each side) attaching the fender to the cowl panel (Fig. 6).

(7) Remove the bolts attaching the splash shields to the cowl (Fig. 7).

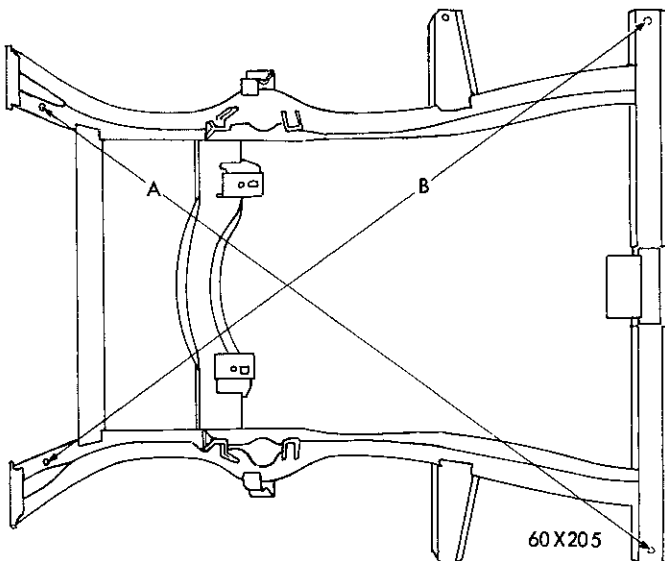


Fig. 5—Frame Diagonal Measurements

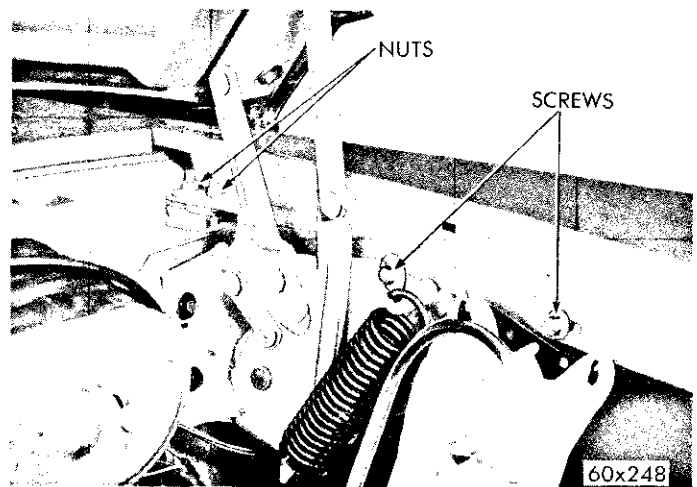


Fig. 6—Fender to Cowl Mounting

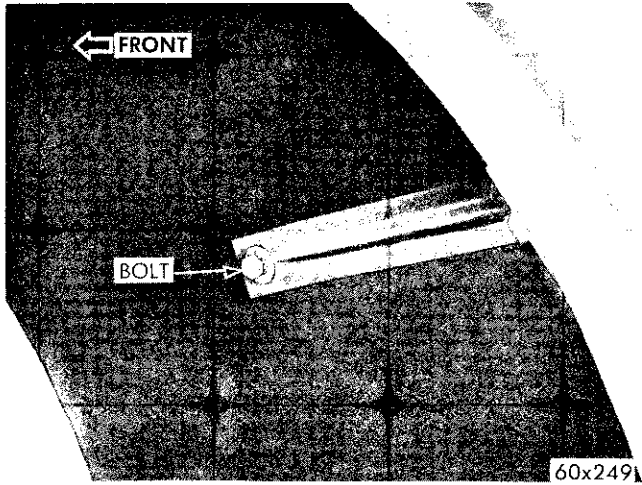


Fig. 7—Splash Shield to Cowl Mounting

(8) Remove the splash shield to body frame bolts (Fig. 8) and the splash shield to stub frame bolts (Fig. 9).

(9) Remove the fender to body sill bolts (two each side), (Fig. 8) and the fender to body post bolts.

(10) Remove the bolts attaching the front end sheet metal to the stub frame yokes (Fig. 10).

(11) Disconnect the radiator yoke from the frame.

(12) Raise the fenders off of the mounting studs at the cowl and remove all front end sheet metal and radiator as an assembly. With all front end sheet metal removed, raise the car on a hoist.

(13) Disconnect the propeller shaft and the trans-

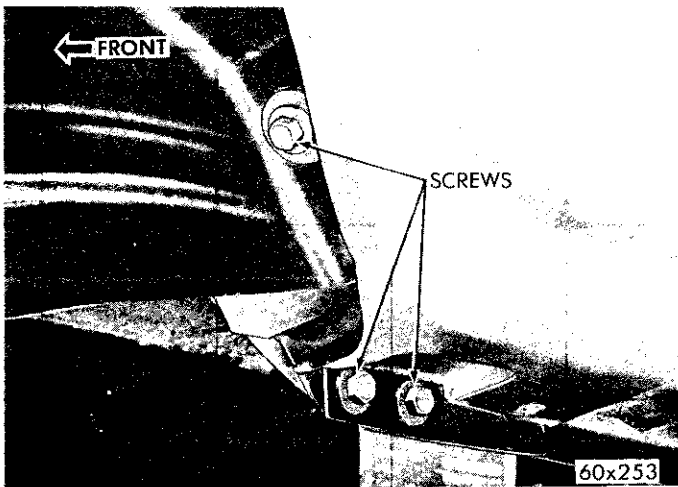


Fig. 8—Splash Shield to Body Frame Mounting

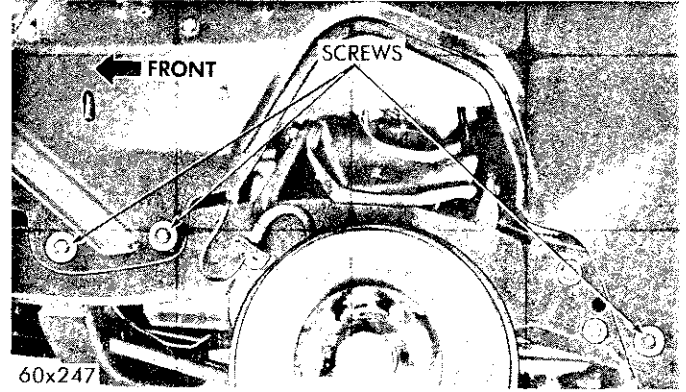


Fig. 9—Splash Shield to Stub Frame Mounting

mission push button cable from the transmission and the exhaust pipe at the front of the muffler.

(14) Remove the steering pitman arm and the steering gear to frame mounting bolts.

(15) Disconnect the fuel line from the flexible

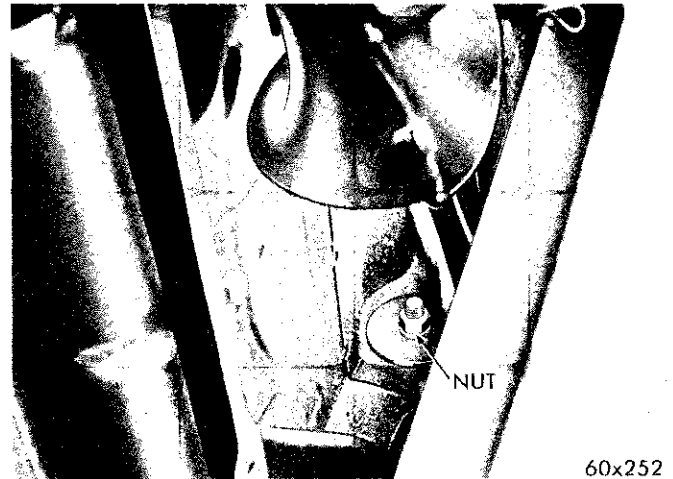


Fig. 10—Radiator Support to Frame Yoke Mounting

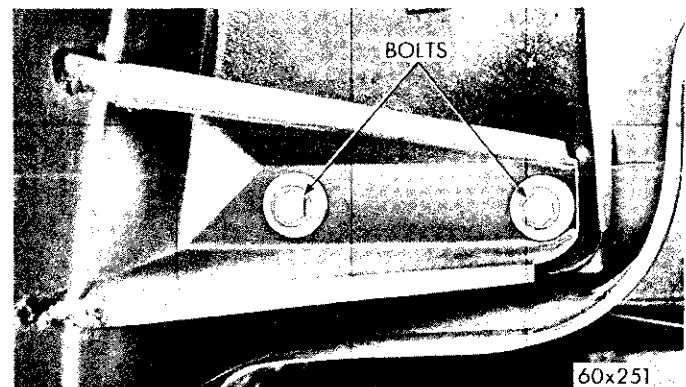


Fig. 11—Body to Frame Outrigger Mounting

connection at the rear of the stub frame right side rail.

(16) Remove the brake line from the "tee" on the rear axle and at the "tee" on the stub frame left side rail.

(17) Lower and place the car on floor stands. The floor stands should be placed under the rear axle and under the forward edge of the floor sills.

NOTE: To protect the floor sills, wooden blocks should be placed between the floor stands and the floor sills.

(18) Disconnect all electrical wires from the engine, hand brake cable from inside the car, power steering hoses (if so equipped), brake lines at the master cylinder, carburetor, throttle linkage and the heater hoses.

(19) Place a hydraulic jack under the stub frame rear crossmember to hold it in position when the body to the frame mounting bolts (Figs. 11 and 12) are removed.

NOTE: Two bolts are located near the top of the curved portion of the body to frame crossmember.

(20) Remove the frame to body bolts. Lower the stub frame and engine assembly and roll unit out from the body.

b. Installation

If frame is to be replaced, remove all serviceable units from the old frame and install them on the new frame.

(1) Position the frame and engine assembly under the body.

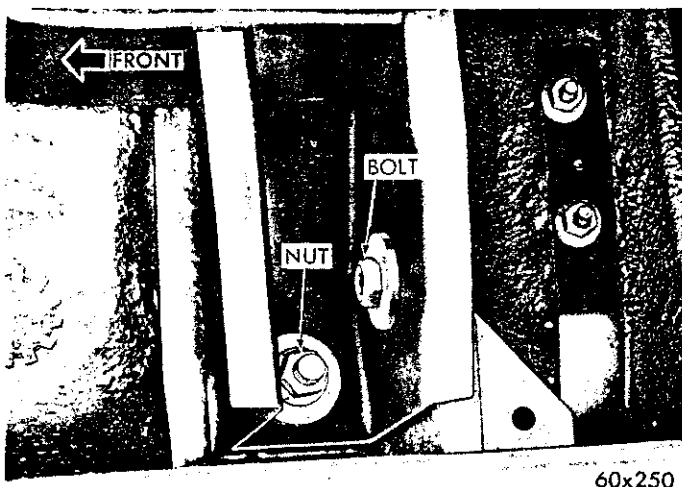


Fig. 12—Body to Frame Crossmember Mounting

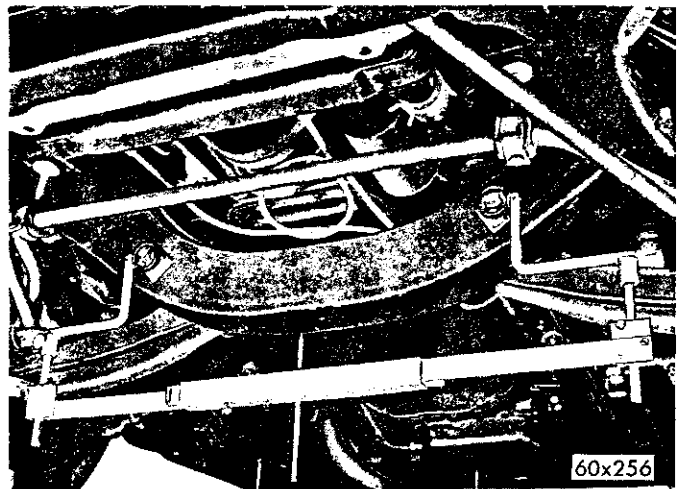


Fig. 13—Front Alignment Gauge (Typical Installation)

(2) Install the body to frame bolts and tighten to 75 foot-pounds.

(3) Check the body to stub frame alignment (Paragraph 3).

(4) Raise the car and connect the exhaust pipe to the muffler and the propeller shaft to the transmission.

(5) Connect the fuel line to the flexible connector at the rear of the frame right side rail.

(6) Install the steering gear on the frame and the pitman arm on the steering gear and link.

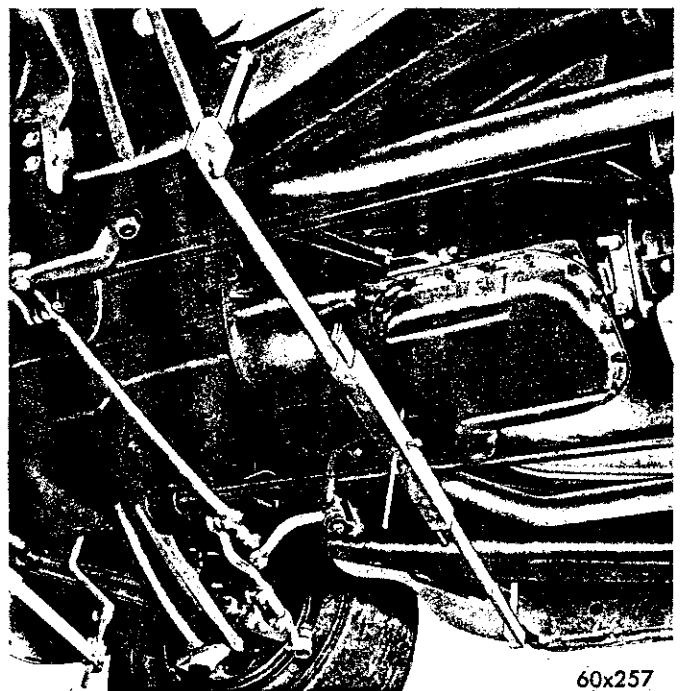
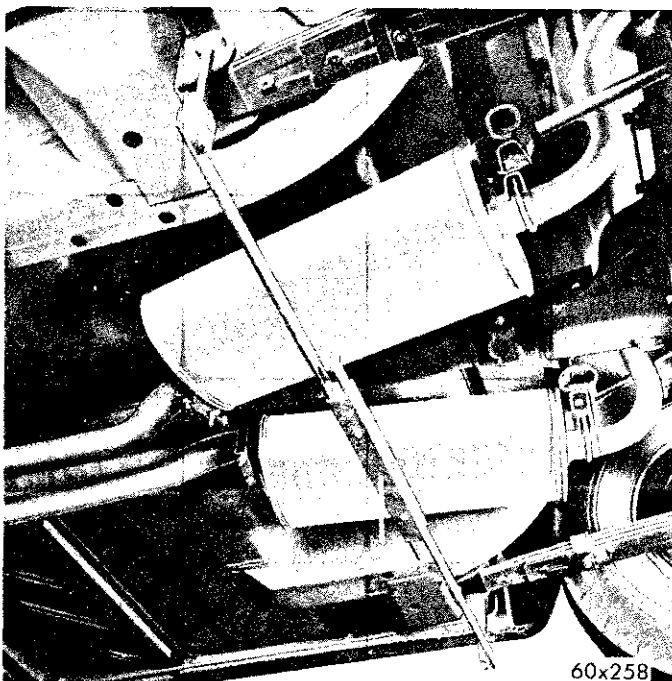


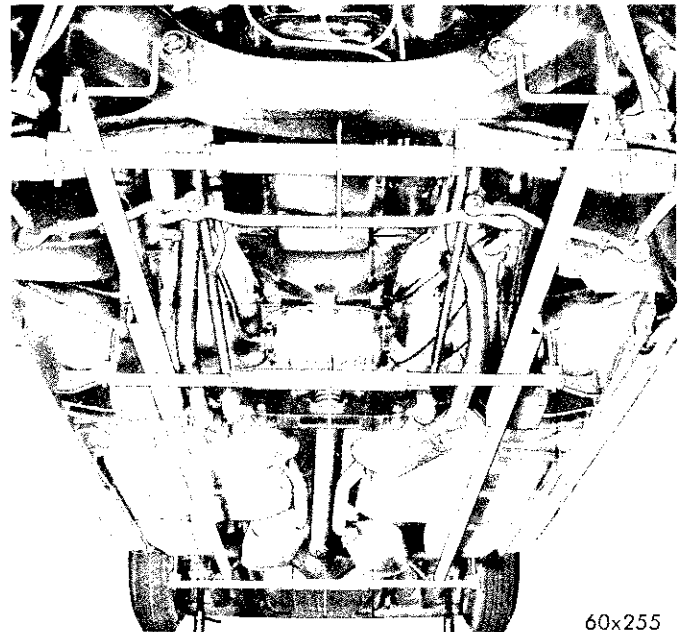
Fig. 14—Center Alignment Gauge (Typical Installation)

- (7) Install the brake line from the rear axle tee.
- (8) Lower the car to the floor and connect the brake lines to the master cylinder.
- (9) Connect the power steering hoses (if so equipped) and the heater hoses.
- (10) Connect the carburetor and throttle linkage.
- (11) Connect the hand brake cable.
- (12) Connect all electrical wires to the engine.
- (13) Position the front end sheet metal on the frame and install the mounting bolts loosely. Align the front end sheet metal and tighten all mounting bolts securely.
- (14) Connect the radiator hoses and heater hoses. Fill the cooling system.
- (15) Raise the car and connect the transmission push button cable. Adjust the cable and lower car to floor.
- (16) Refill the power steering unit with oil (if so equipped).
- (17) Bleed and refill the braking system.
- (18) Check front end height and adjust as necessary.
- (19) Check front end alignment and adjust as necessary.



60x258

Fig. 15—Rear Alignment Gauge (Typical Installation)



60x255

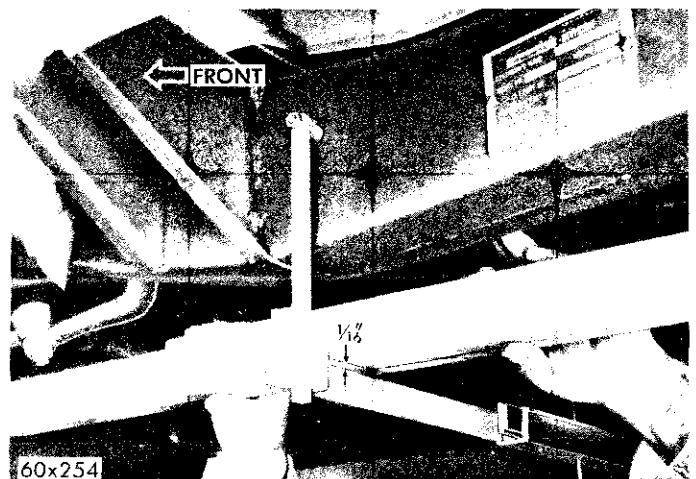
Fig. 16—Horizontal Checking Bars in Position (Typical Installation)

3. BODY TO FRAME ALIGNMENT

Body to Frame Alignment checks should be performed whenever the stub frame has been removed, replaced, repaired or the front end sheet metal cannot be properly aligned.

To check body to frame alignment, using Tool C-3802, refer to the Gauge Adapter Chart to determine the correct gauge adapter positions.

- (1) Remove the cotter pins from the lower control arm shafts and position the 36 inch gauge on the shaft nuts as shown in Figure 13.
- (2) Using the 45 inch gauge (middle gauge) posi-



60x254

Fig. 17—Checking Body to Frame Alignment (Typical)

ALIGNMENT GAUGE ADAPTOR CHART

Model	Wheelbase	Front Gauge	Center Gauge	Rear Gauge
PS-1, PS-3, PC-1	122	B	A	D
PC-2, PC-3	126	C	C	D
PY-1	129	C	C	C
Town and Country	122	C	C	C

tion the gauge adapter in the frame cast holes, as shown in Figure 14.

(3) The 55 inch gauge (rear gauge) fits over the rear spring pivot bolts, as shown in Figure 15.

(4) Place the horizontal alignment bars on the suspended gauges. The short bars are positioned on the front and center gauges and the long bars are positioned on the center and rear gauges, as shown in Figure 16.

(5) The long and short bar should be placed

against each other to determine if any body to frame deflection is evident.

(6) The top and bottom surfaces of the horizontal bars should be perfectly level across their combined surfaces where they meet, however, if this condition is not prevailing, raise both the long and short bar as a unit until they are perfectly level.

(7) Measure the space, created by leveling the bars, between the bars and center gauge (Fig. 17).

The preferred spacing between the horizontal bars and the center gauge is 0 inch $\pm 1/16$ inch. The differential measurements between one side to the other should not exceed $1/8$ inch.

Example — Right side reads $\pm 1/16$ ". Left side cannot exceed $-1/16$ ".

Should measurements be out of limits of the recommended settings, it will be necessary to install the slotted shims, available in $1/16$ and $1/8$ inch thicknesses between the stub frame outriggers and the body front mounting brackets.

For example — if measurements at the center gauge is $\pm 1/8$ ", insert the necessary amount of shims at the front mounting brackets.