

GROUP 13
FRAME
CONTENTS

	Page
Alignment Gauge Adapter Chart.....	6
Body to Frame Alignment.....	6
Checking Frame Alignment.....	1
Frame Replacement	3

SERVICE PROCEDURES

The stub frame is attached 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.

2, 3, 4 and 5 may be used as a guide in measuring 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 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.

FRAME ALIGNMENT MEASUREMENT

NOTE: Care should be taken to make sure that any

The various frame dimensions shown in Figures 1,

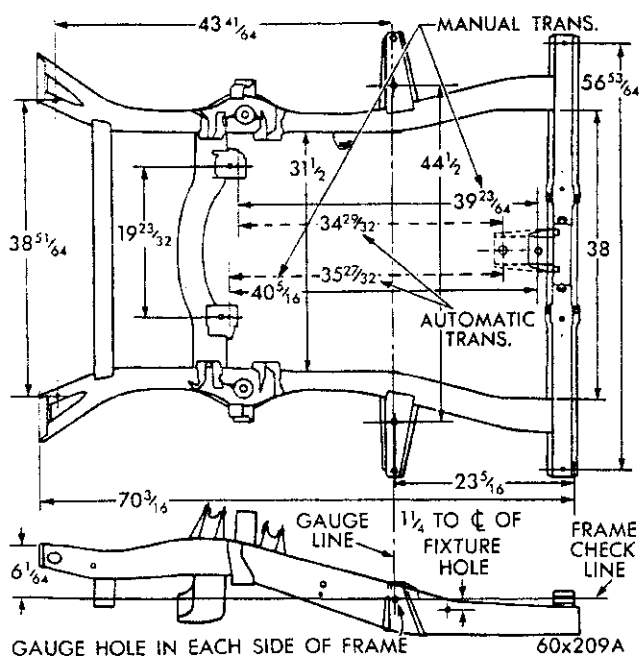


Fig. 1—Frame Dimensions (300-Newport)

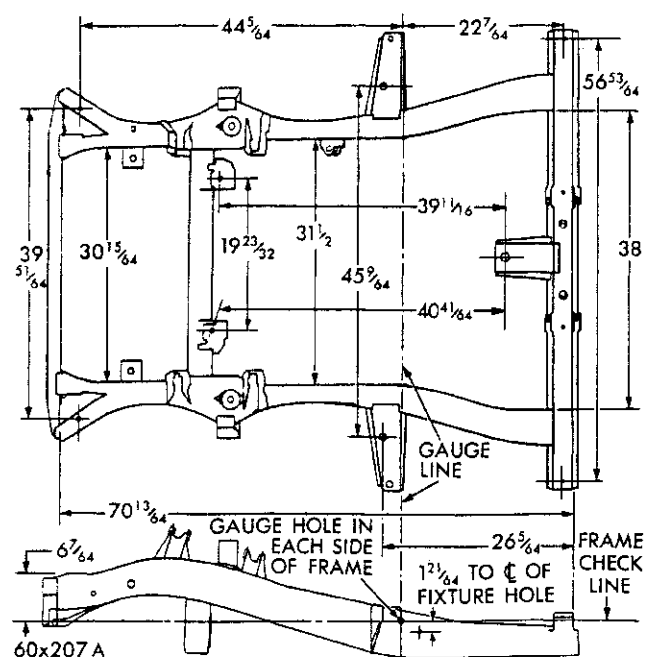


Fig. 2—Frame Dimensions (New Yorker)

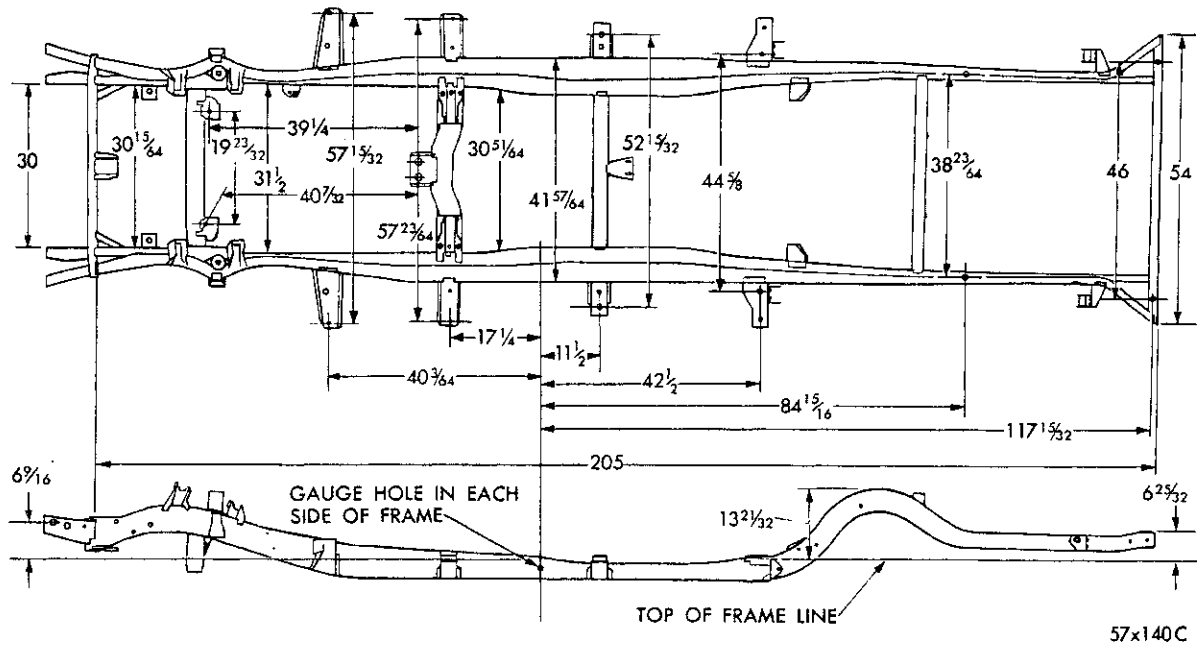


Fig. 3—Frame Dimensions (Imperial)

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.

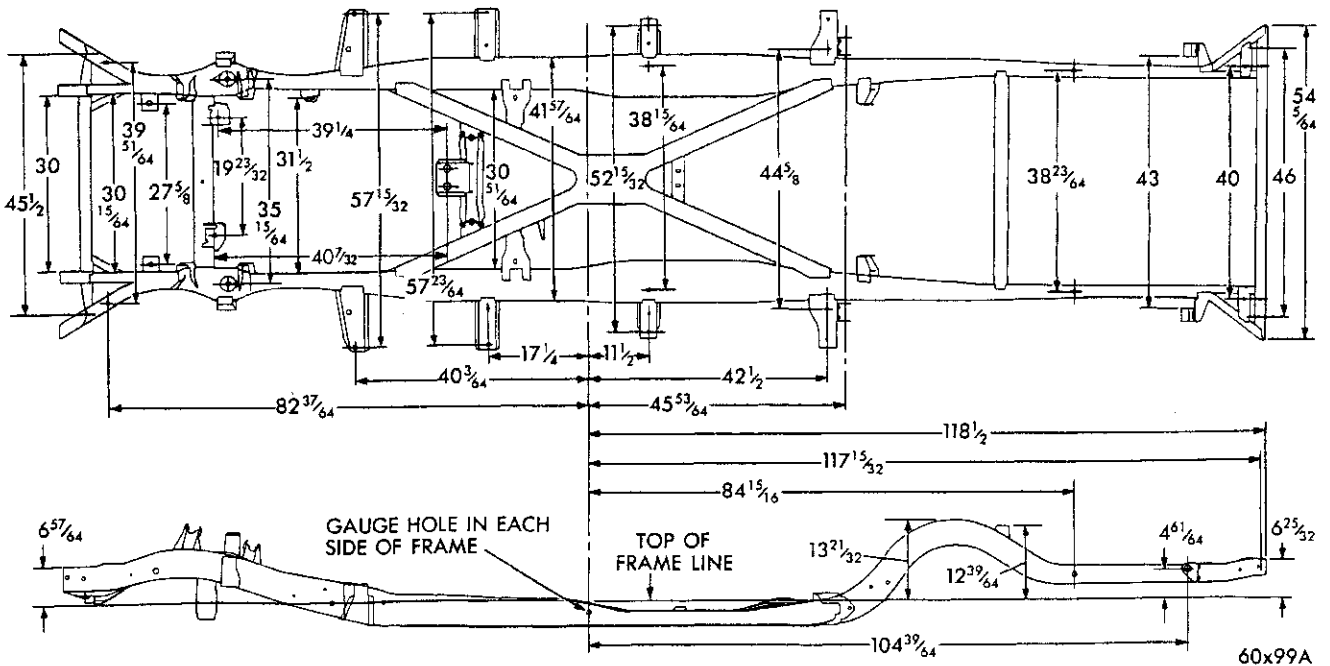


Fig. 4—Frame Dimensions (Imperial-Convertible)

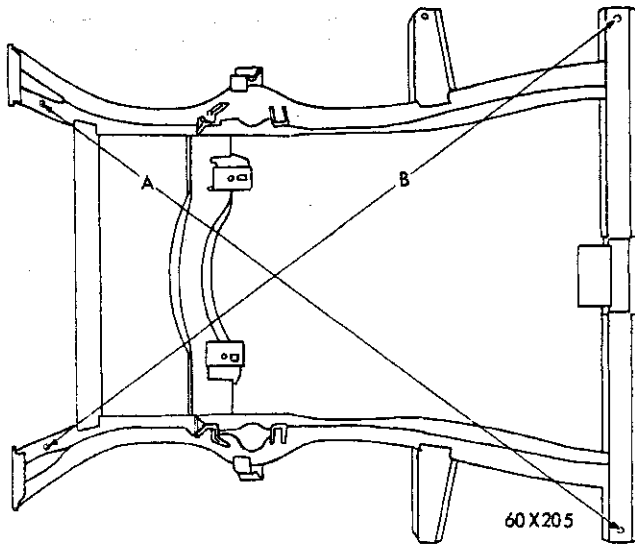


Fig. 5—Frame Diagonal Measurements

FRAME REPLACEMENT (Chrysler)

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 head lamp wires and the horn wires.
- (4) Remove the hood hinge to the fender mounting screws (one each side).
- (5) Remove the screws attaching the voltage regulator, horn relay or starter solenoid from the fender splash shields.

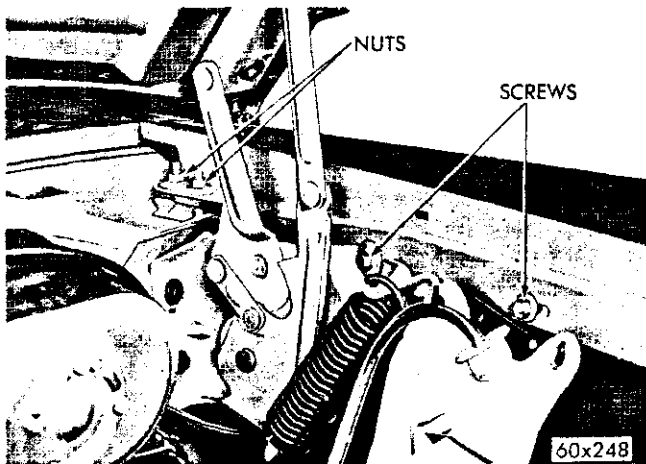


Fig. 6—Fender to Cowl Mounting

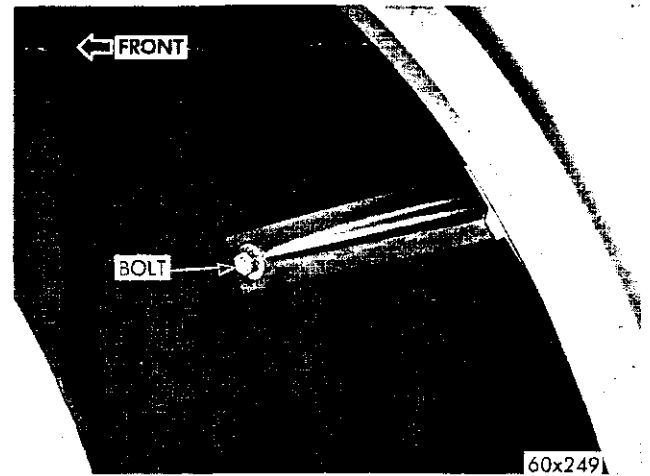


Fig. 7—Splash Shield to Cowl Mounting

- (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).
- (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

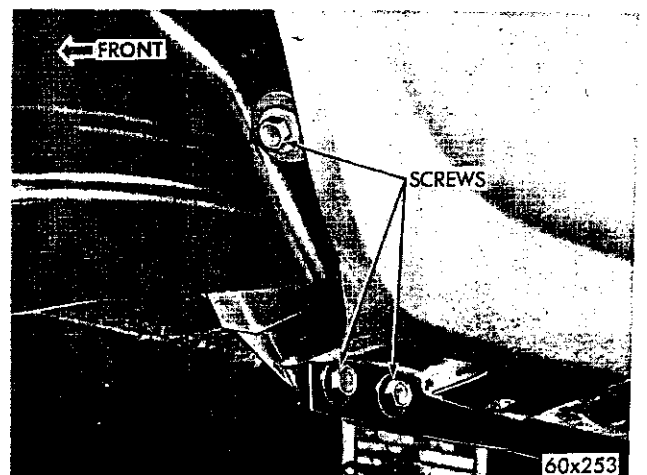


Fig. 8—Splash Shield to Body Frame Mounting

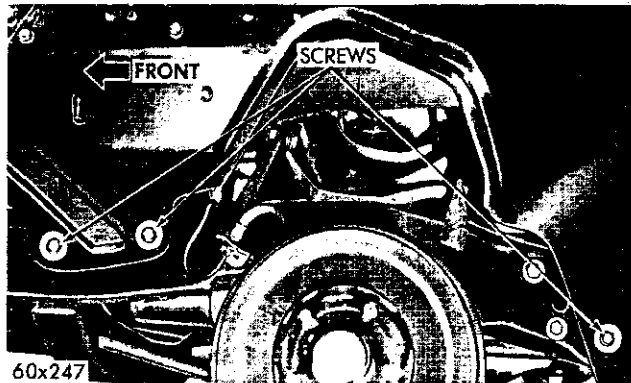


Fig. 9—Splash Shield to Stub Frame Mounting

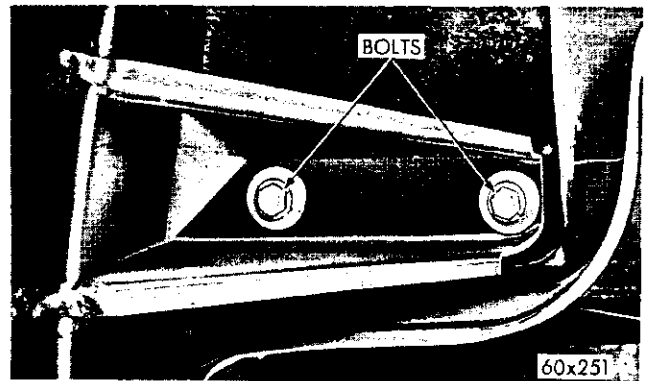


Fig. 11—Body to Frame Outrigger Mounting

and radiator as an assembly. With all front end sheet metal removed, raise the vehicle on a hoist.

(13) Disconnect the propeller shaft and the transmission push button cable from the transmission. Disconnect the exhaust pipe at the front of the muffler. Disconnect the parking brake cable.

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

(15) Disconnect the fuel line from the flexible 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 vehicle 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 the engine and transmission, and all serviceable units from the old frame and install them on the new frame.

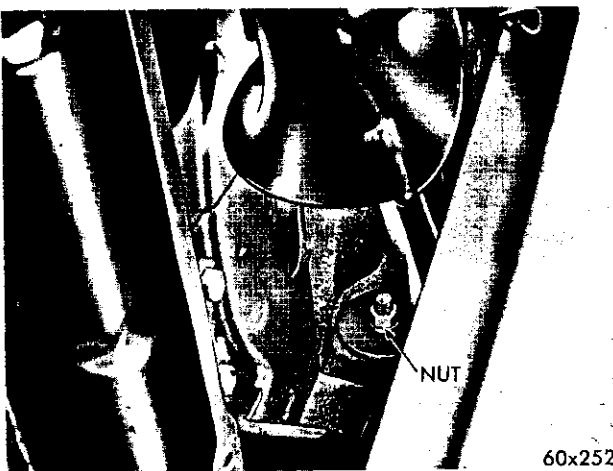


Fig. 10—Radiator Support to Frame Yoke Mounting

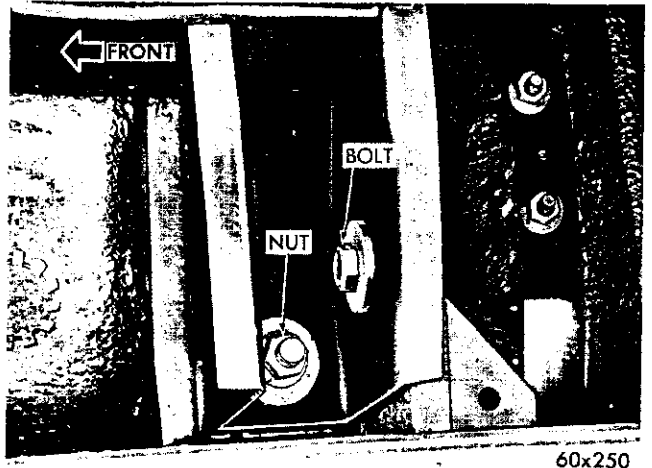


Fig. 12—Body to Frame Crossmember Mounting

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

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

(3) Measure the body to stub frame alignment. See paragraph. "Body to Frame Alignment".

(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. Install the steering gear arm and link.

(7) Install the brake line to the rear axle tee.

(8) Lower the vehicle to the floor and connect the brake lines to the master cylinder.

(9) Connect the power steering hoses (on Power Steering equipped cars) and the heater hoses.

(10) Connect the carburetor and throttle linkage.

(11) Connect the parking 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 Mopar

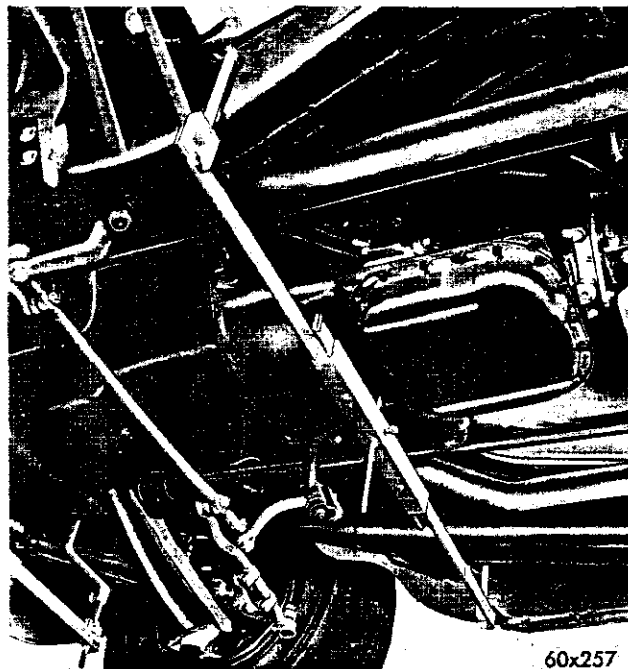


Fig. 14—Center Alignment Gauge Installed (Typical)

Power Steering fluid. (On cars equipped with power steering.)

(17) Bleed and refill the braking system.

(18) Measure the front end height and adjust as necessary.

(19) Measure the front end alignment and adjust as necessary.

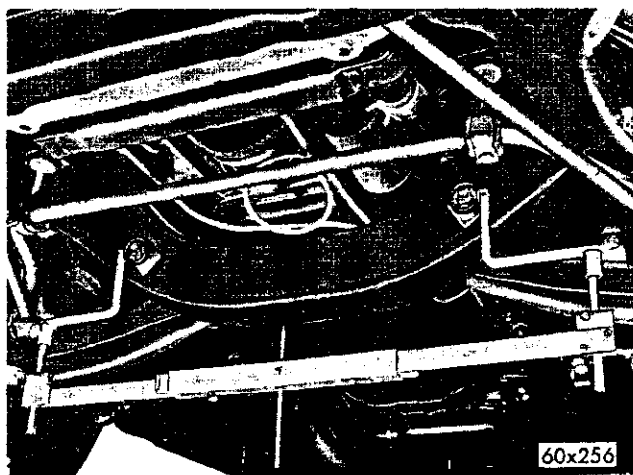


Fig. 13—Front Alignment Gauge Installed (Typical)

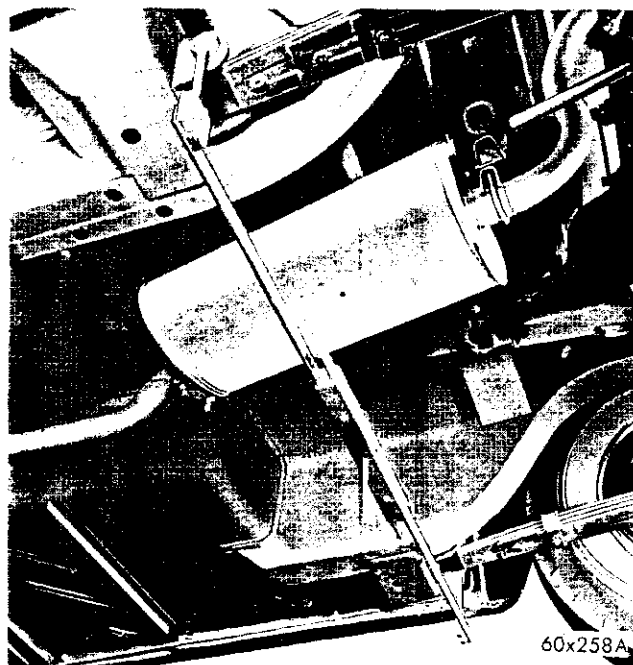


Fig. 15—Rear Alignment Gauge Installed (Typical)

BODY TO FRAME ALIGNMENT

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

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

(1) Remove the cotterpins from the lower control arm shafts and position the 36 inch gauge on the shaft nuts, as shown in Figure 13 and 14.

(2) Using the 45 inch gauge (middle gauge) position the gauge adapter in the frame cast holes, as shown in Figure 15.

(3) 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.

(4) The long and short bar should be placed against each other to determine if any body to frame deflection is evident.

(5) 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

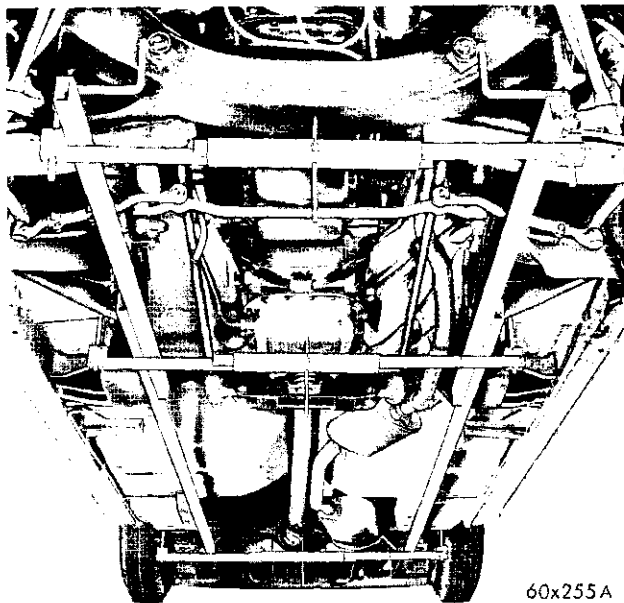


Fig. 16—Horizontal Checking Bars in Position (Typical)



Fig. 17—Checking Body to Frame Alignment

and short bar as a unit until they are perfectly level.

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

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

Example—Right side reads $+\frac{1}{16}$ ". Left side should not exceed $-\frac{1}{16}$ ".

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

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

ALIGNMENT GAUGE

ADAPTOR CHART

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

After the frame to body adjustment is performed, remove the measuring gauges, and install the cotter pins in the lower control arm shafts.