

3D PIVOT MEASURING SYSTEM

(Part No. 19100)

Introduction..... 1-2

Components.....3-4

Set Up procedure5-17

Measuring Examples.....18-21

Important Information.....22

Using Vehicle Specs.....23-25

Replacement Parts List.....26



Wedge Clamp Systems Inc. 170 – 21320 Gordon Way, Richmond, BC V6W 1J8
Tel: (604)207-9595 | Fax: (604)207-9593 | Toll Free: 1-800-615-9949

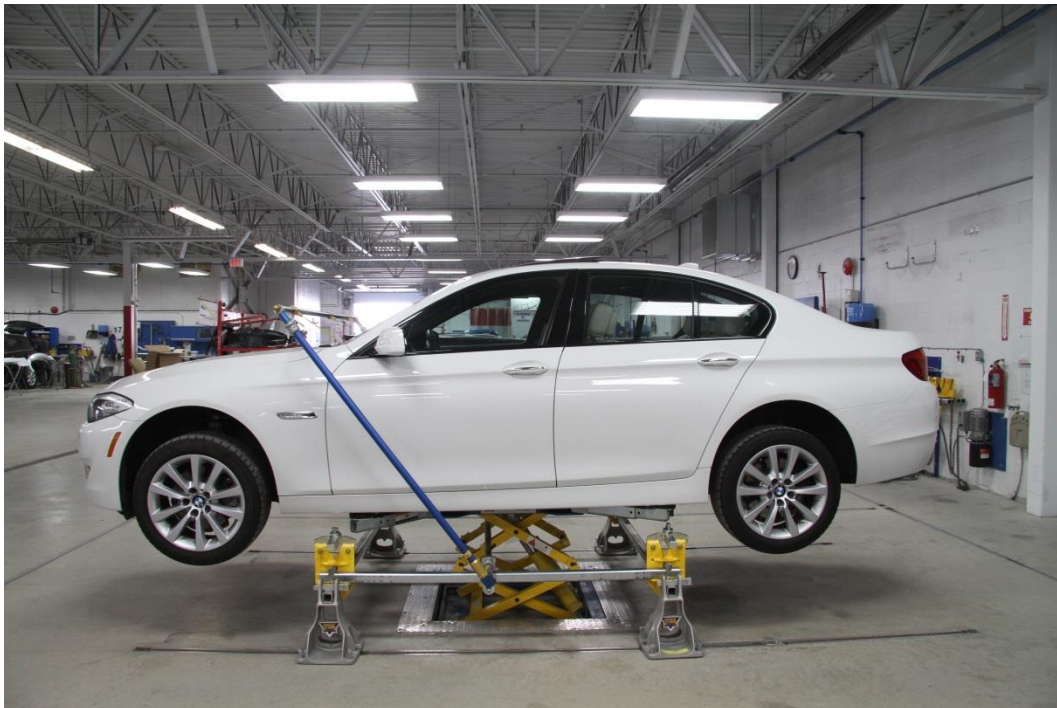


INTRODUCTION

19100 Pivot Measuring System

This measuring system was carefully designed to give you maximum performance in restoring total vehicle symmetry in the fastest time possible. The more you use it, the more uses you will find for it. Because of the pivoting action, there are fewer pieces required to reach any point you wish to check for misalignment – whether it is for damage analysis or to have accurate targets to pull to.

The system works with any standard 3D vehicle measuring specification. Use with the Wedge Clamp Eclipse electronic measuring system #E1000 for full upper and lower body measuring.



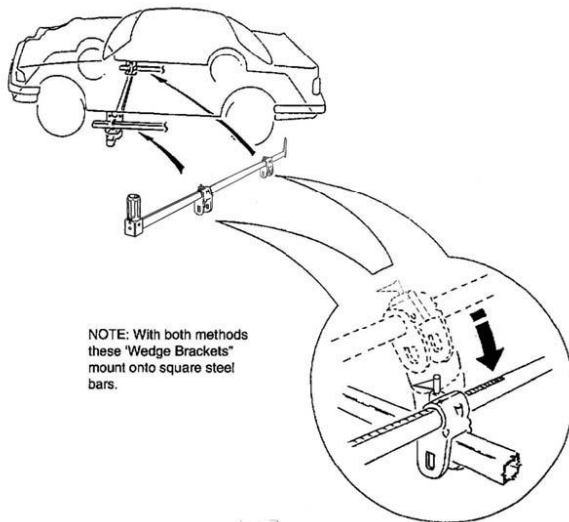
There are two methods for mounting the 19100 onto a vehicle:

1. Mount directly on to Wedge Clamp's anchoring system bars.



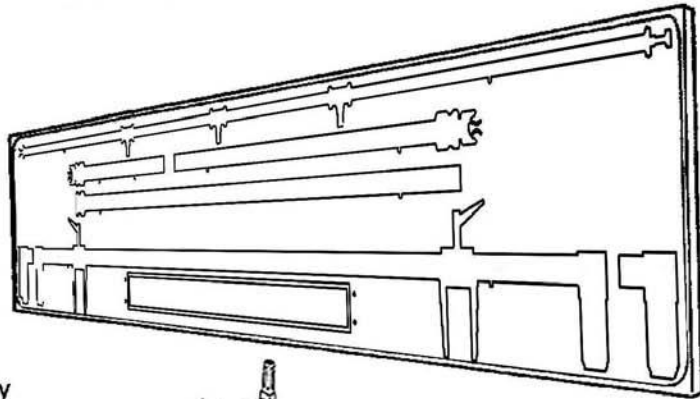
OR

2. Use the 24000 Pivot Quick Mount Kit. This kit allows you to mount the System independently for damage analysis, or with any other rack or bench system.

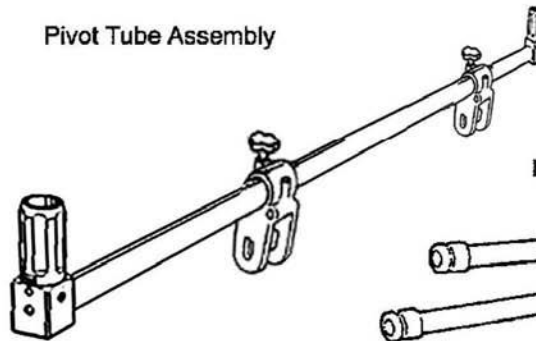


COMPONENTS

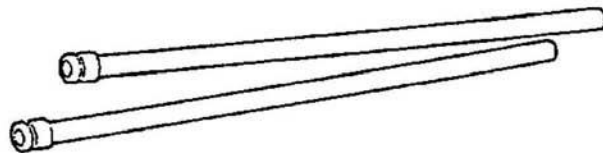
Storage Tool Board



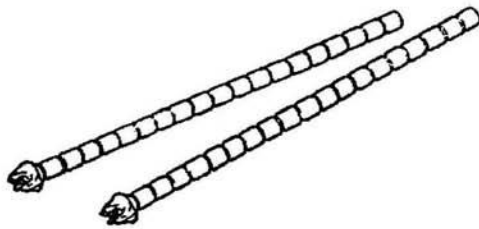
Pivot Tube Assembly



Long side Tubes (outer)



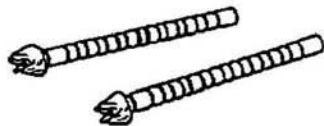
Medium side Tubes (inner)



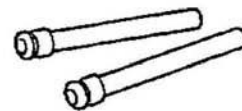
Medium side Tubes (outer)



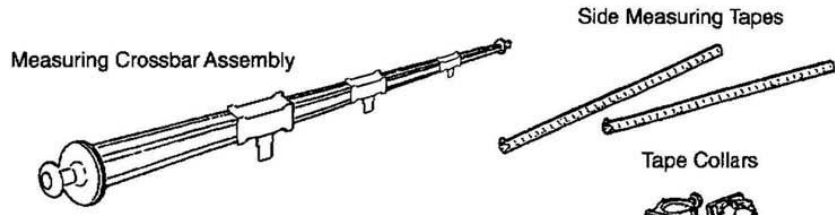
Short side Tubes (outer)



Short side Tubes (inner)

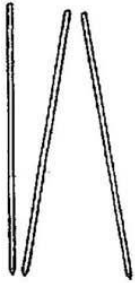


COMPONENTS

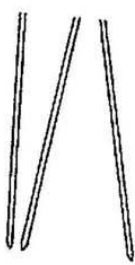


Measuring Pins

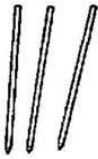
27"
(685 mm)



21 1/2"
(546 mm)



14"
(355 mm)



11"
(279 mm)



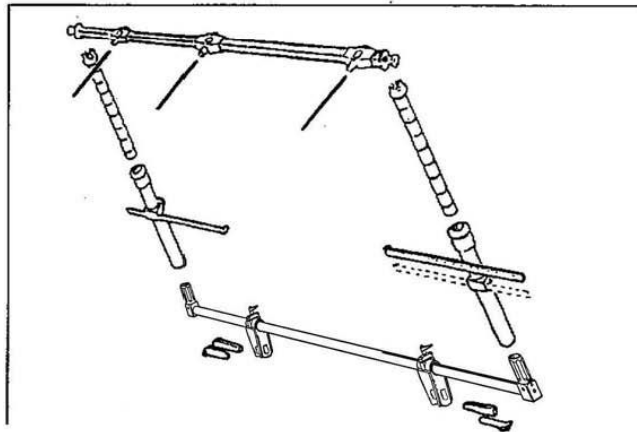
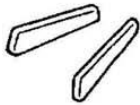
8"
(203 mm)



5 1/2"
(140 mm)

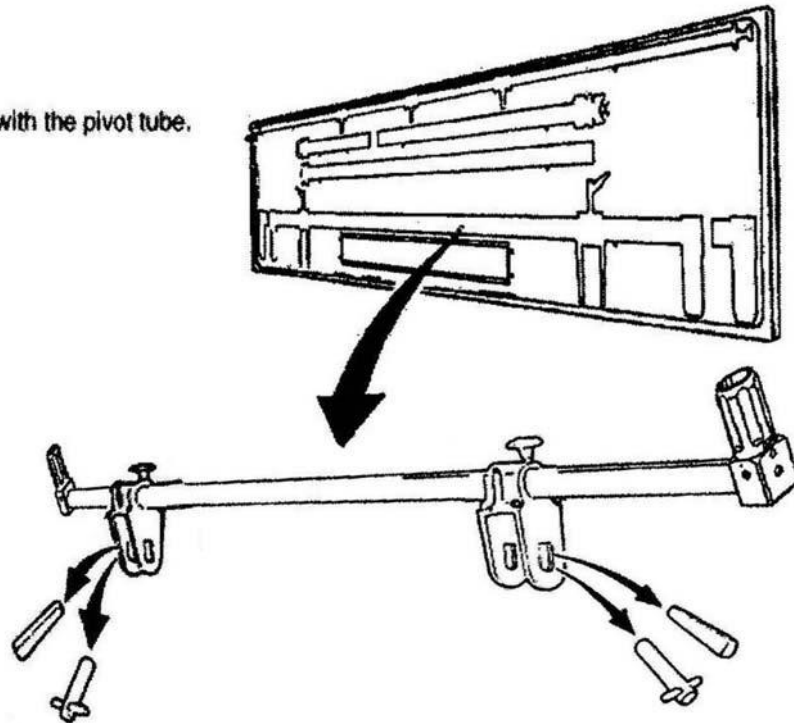


Plastic Wedges

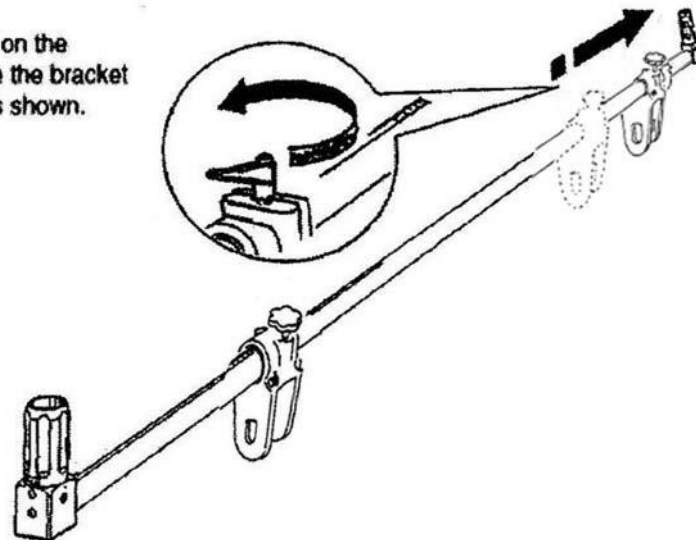


SET UP PROCEDURE

- 1** Start with the pivot tube.

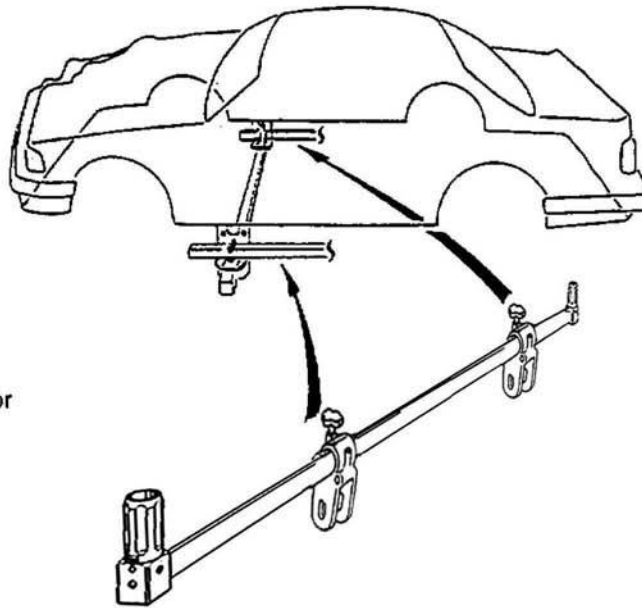


- 2** Loosen the hand knobs on the wedge bracket and slide the bracket to the end of the tube as shown.

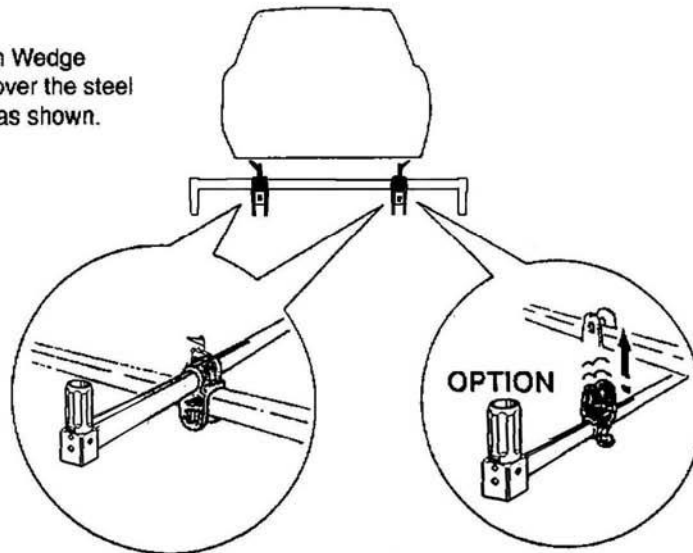


SET UP PROCEDURE

- 3** Install the Pivot Tube **between** the vehicle floor and the steel bars.

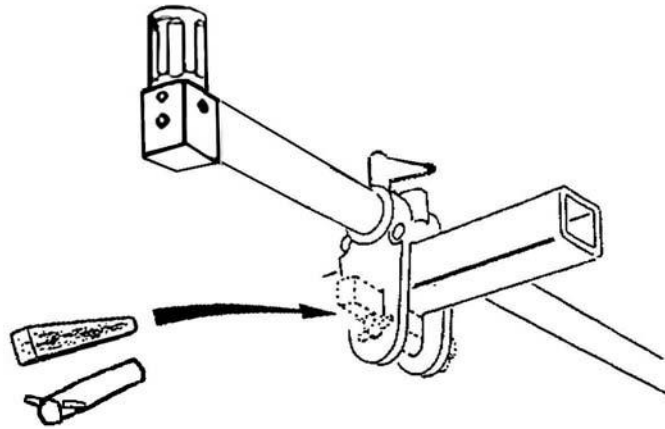


- 4** Place both Wedge Brackets over the steel side bars as shown.



SET UP PROCEDURE

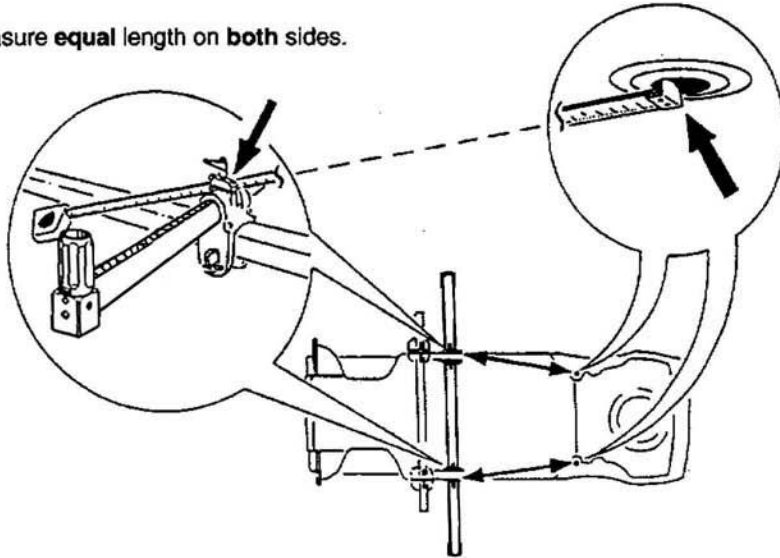
- 5** Install plastic wedges as shown, by hand only



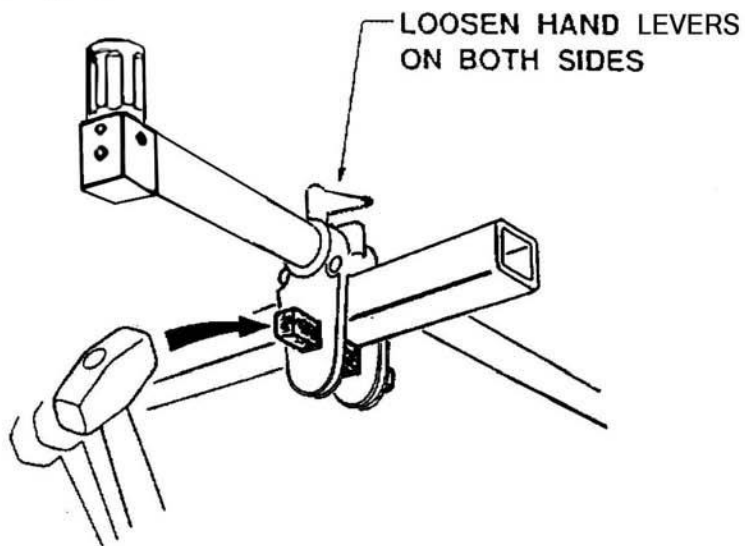
NOTE: Before we can begin to measure, the Pivot Tube must be installed square and centered to the vehicle. Follow Steps 6 to 23 carefully.

SQUARE PIVOT TUBE TO VEHICLE CENTERLINE

6 Measure equal length on both sides.

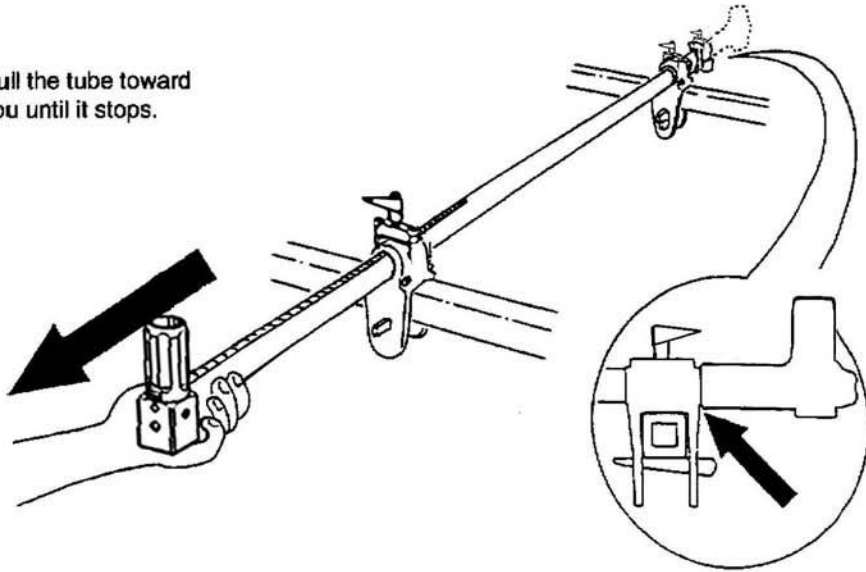


7 Tap the wedges in gently.

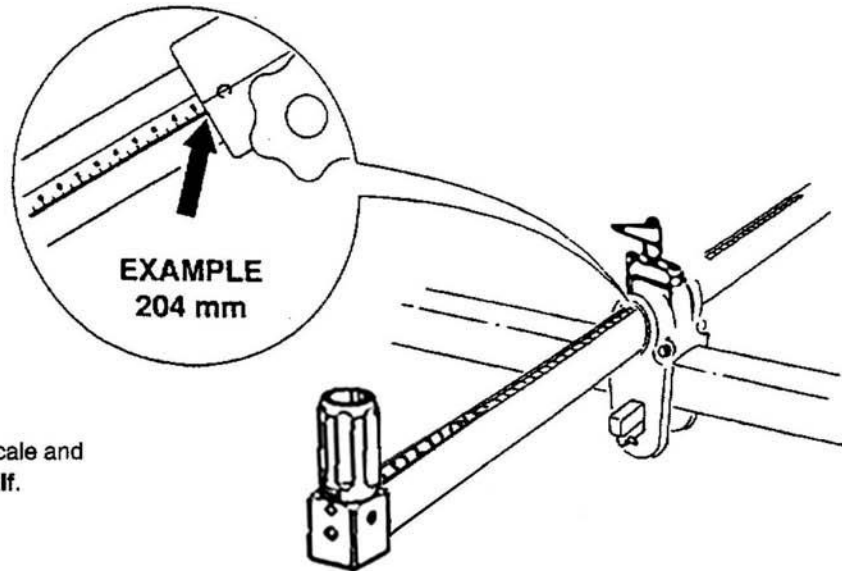


CENTER PIVOT TUBE TO VEHICLE CENTERLINE

- 8** Pull the tube toward you until it stops.

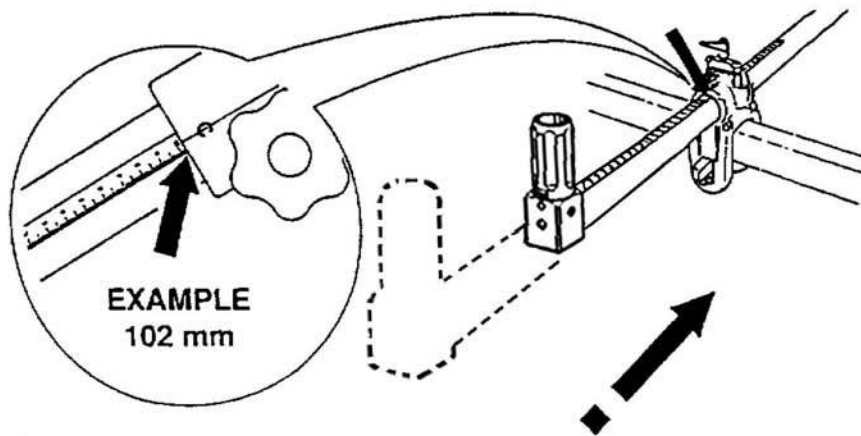


- 9** Read the scale and divide in half.

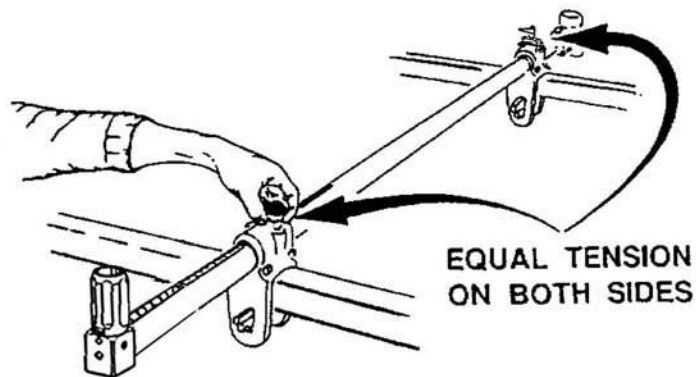


CENTER PIVOT TUBE TO VEHICLE CENTERLINE

- 10** Push the tube back in exactly **half** way.

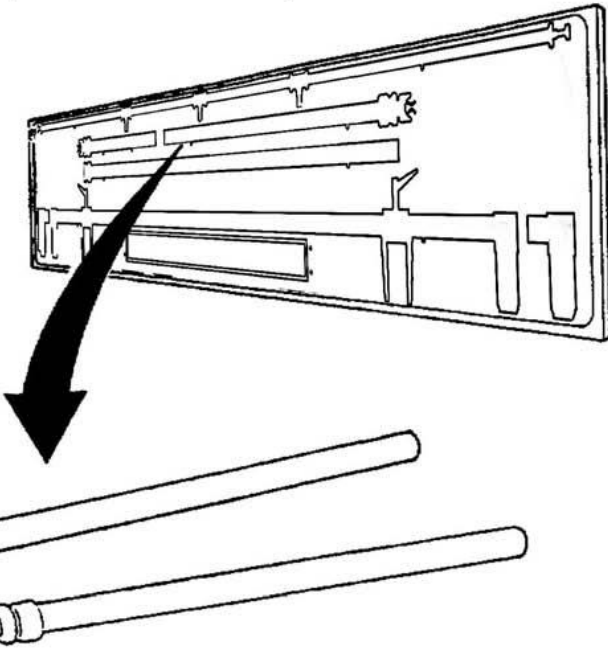


- 11** Tighten the hand levers on both sides to the same tension.

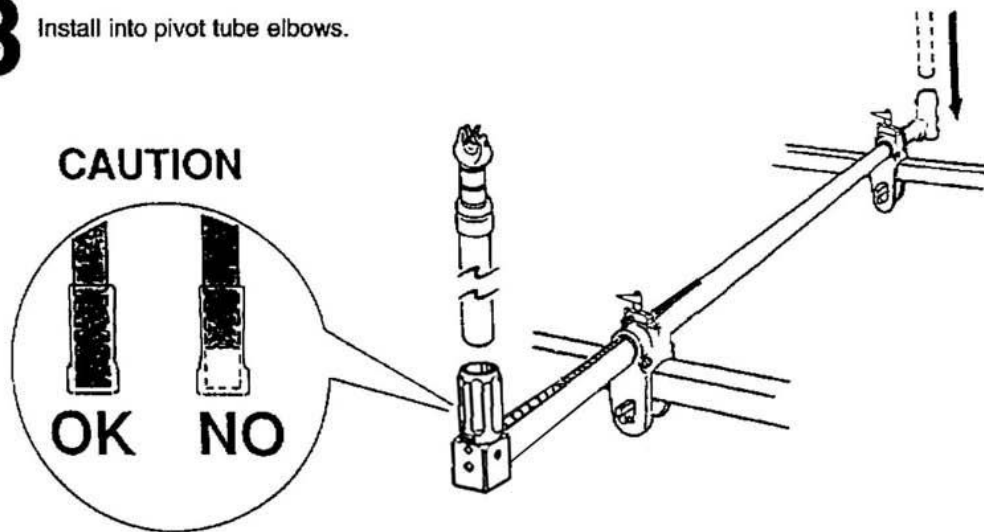


SET UP (CONTINUED)

12 Select a set of medium length side extension tubes.

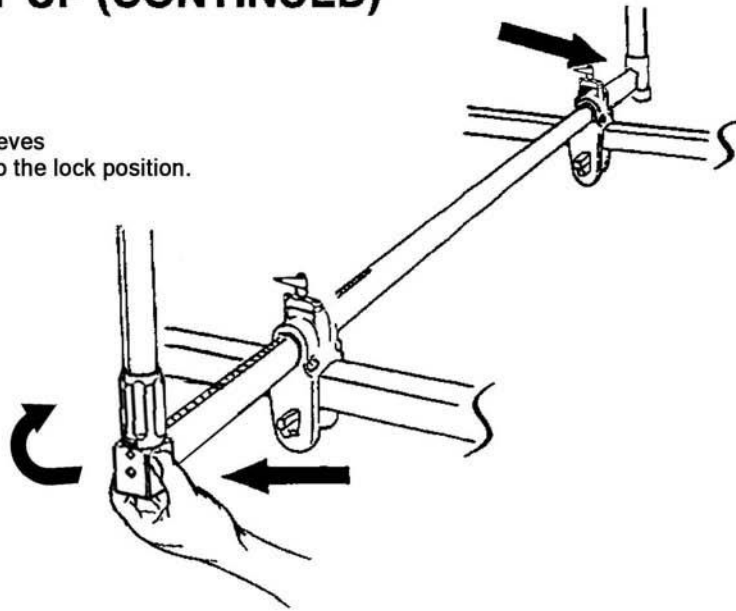


13 Install into pivot tube elbows.

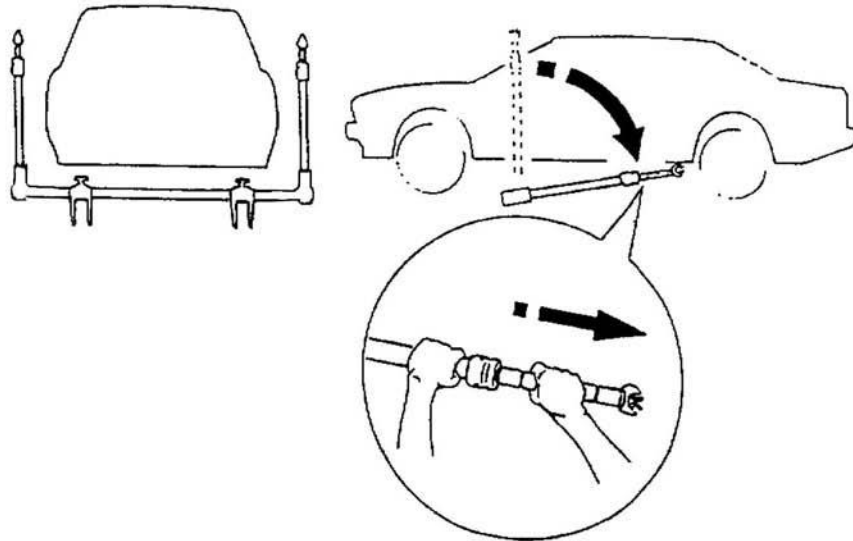


SET UP (CONTINUED)

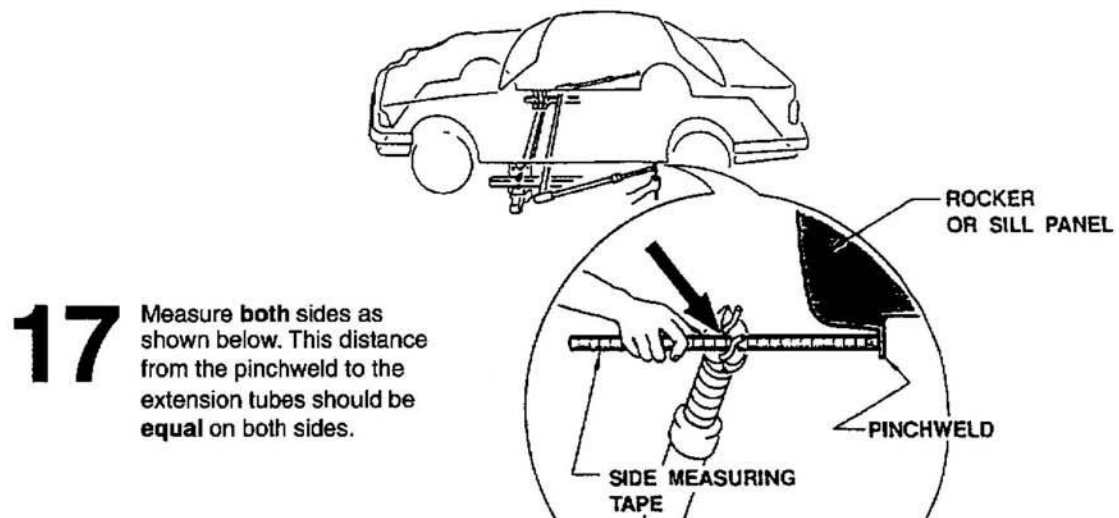
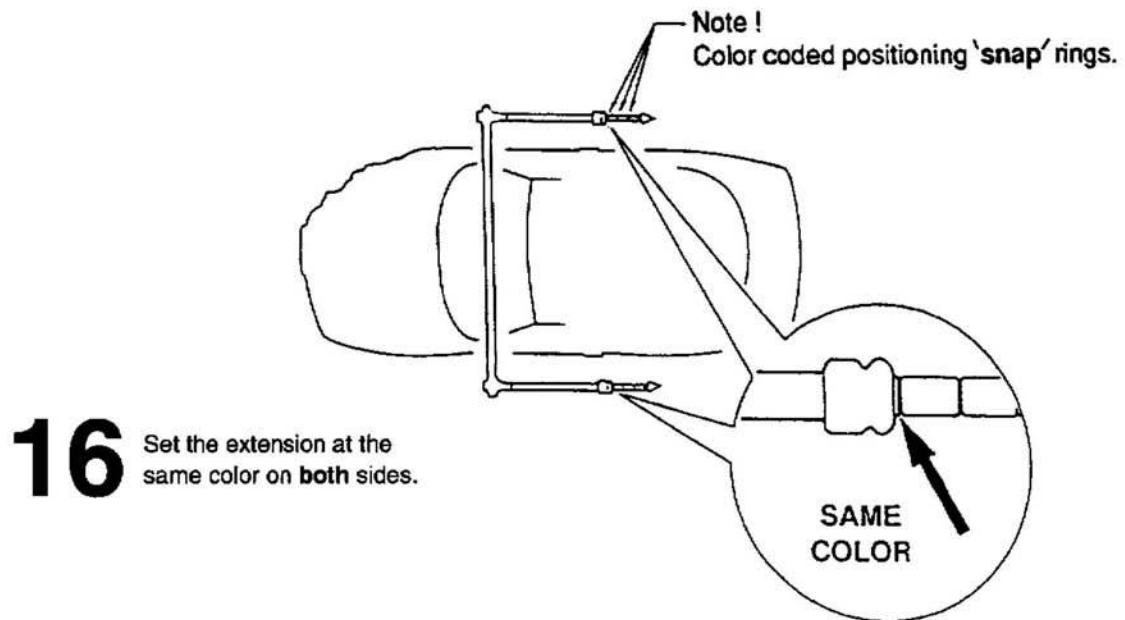
- 14** Tighten **both** sleeves by turning them to the lock position.



- 15** Pivot the side extension tube from vertical to horizontal as shown below.



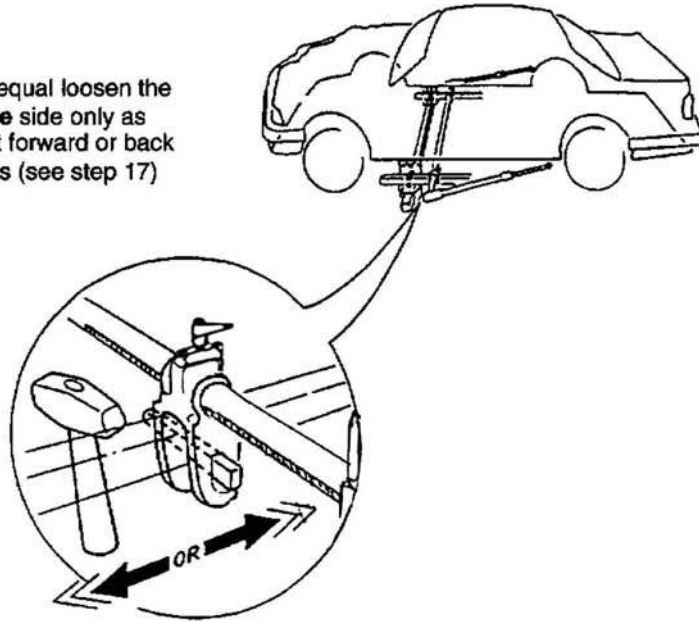
FINAL CALIBRATION, 'SQUARE' PIVOT TUBE



FINAL CALIBRATION, (CONTINUED)

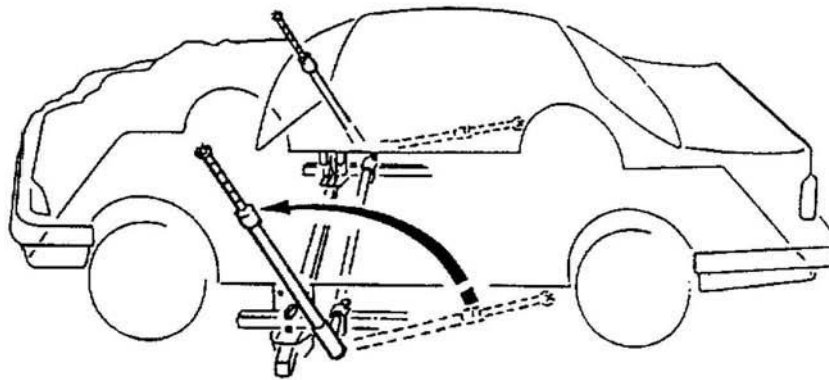
18

If both sides are **not** equal loosen the wedge bracket on **one** side only as shown below. Move it forward or back until those dimensions (see step 17) are the same.



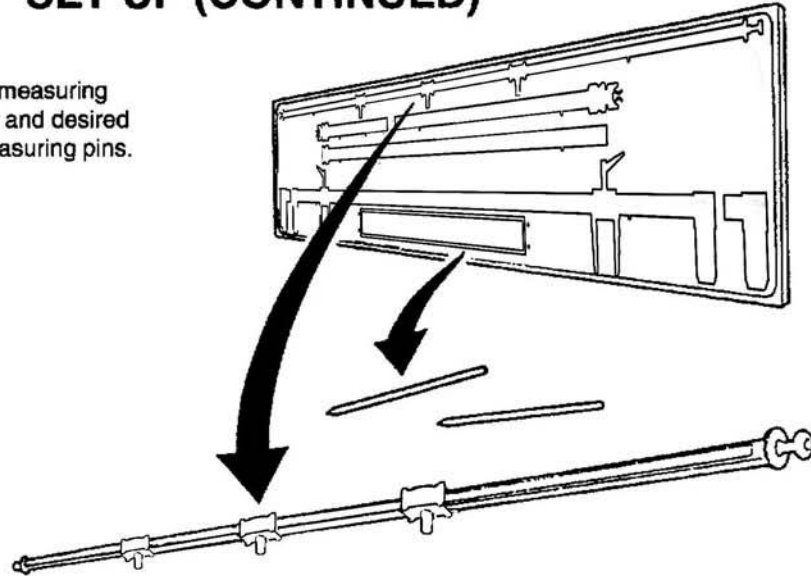
19

Swing the side tube to the desired area you wish to begin at.

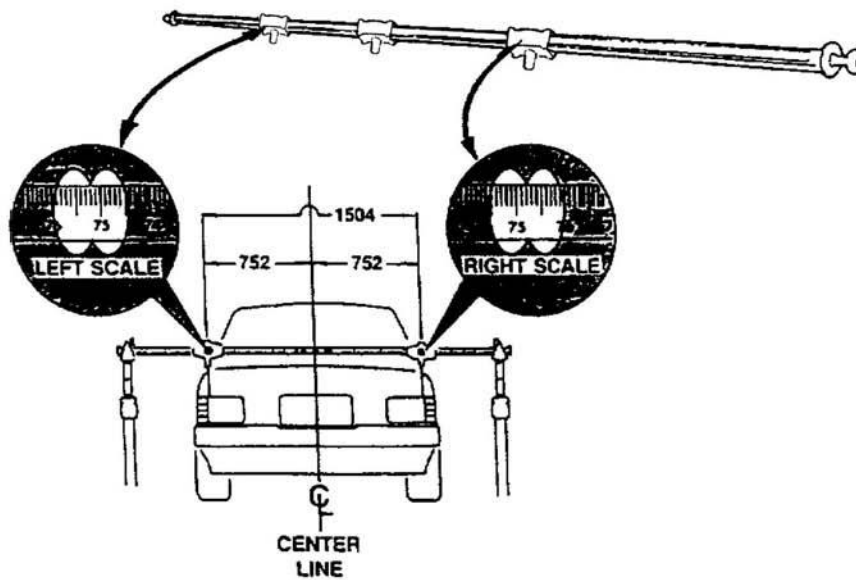


SET UP (CONTINUED)

- 20** Take the measuring cross bar and desired set of measuring pins.

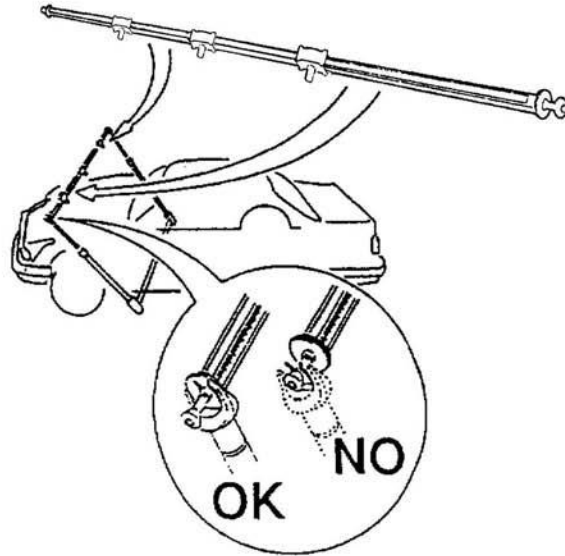


- 21** Notice how the metric scales read outward from the center **Left and Right**. Example below shows 752 millimeters.

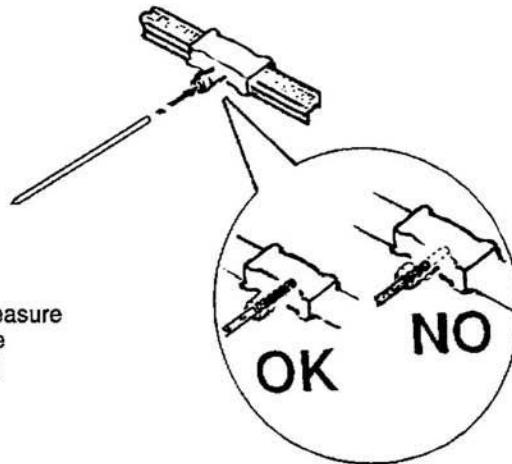


BASIC SET UP COMPLETED

- 22** Install the measuring cross bar. Check that both ends are snapped in correctly.

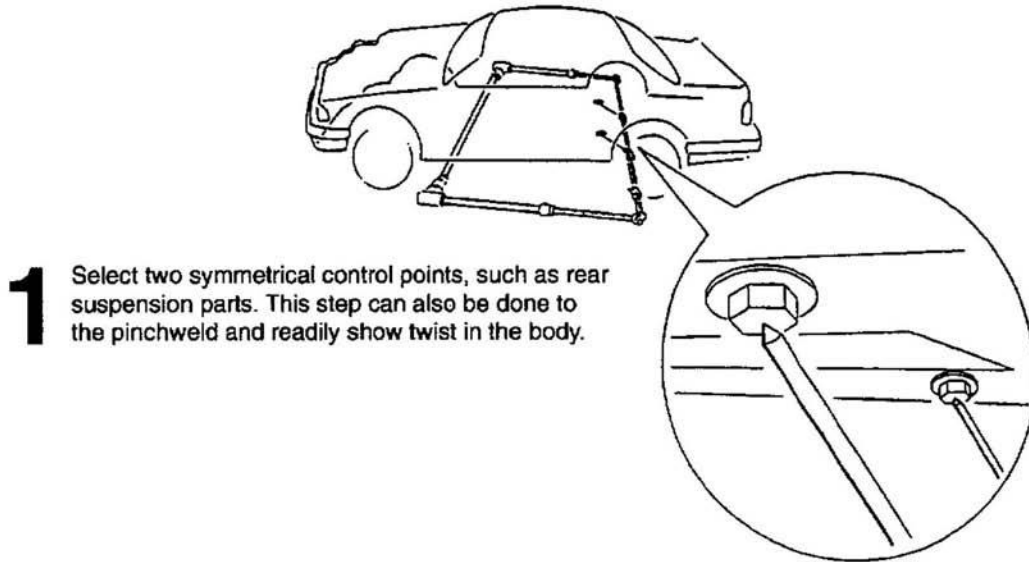


- 23** Insert the pointer pins so that they are "bottomed out" correctly.

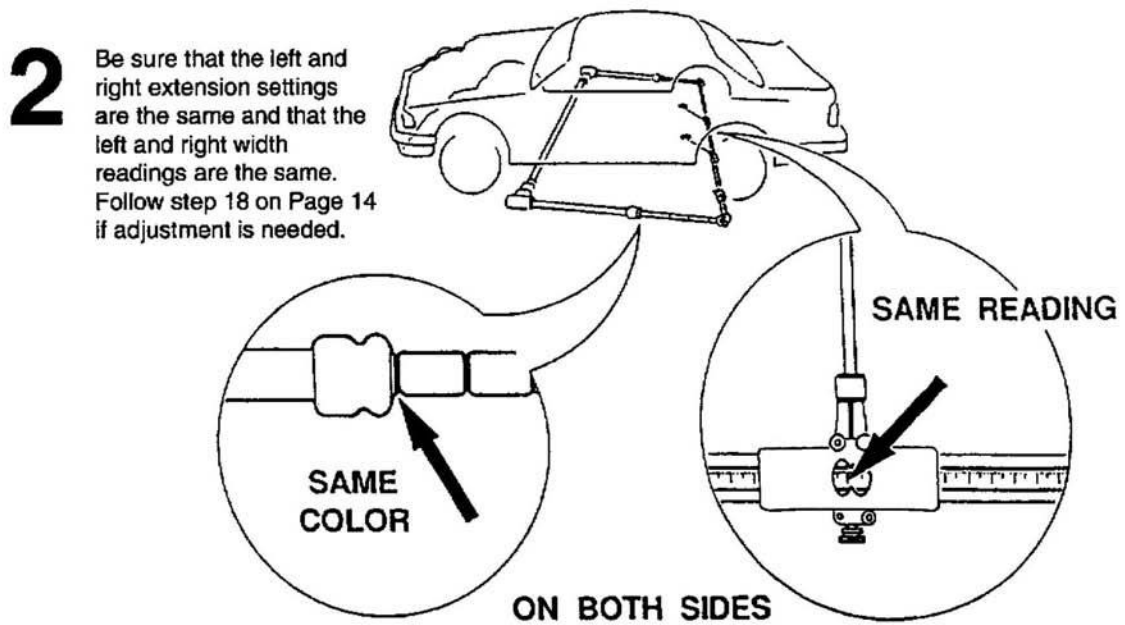


Now you are ready to begin to check and measure the vehicle. It will take a little extra time in the beginning to become familiar with the almost unlimited uses for the system.

OPTION: CALIBRATE SQUARE TO CONTROL POINTS



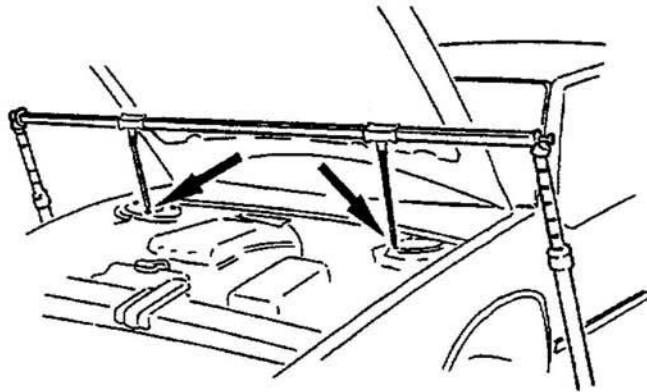
- 1** Select two symmetrical control points, such as rear suspension parts. This step can also be done to the pinchweld and readily show twist in the body.



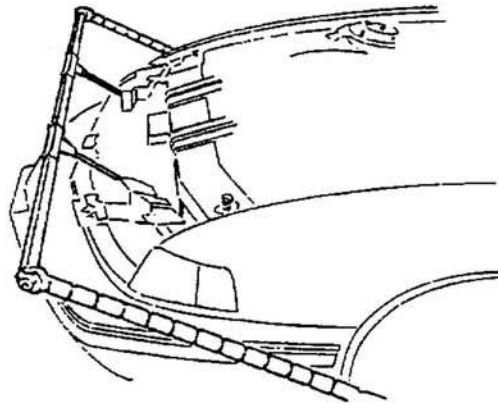
- 2** Be sure that the left and right extension settings are the same and that the left and right width readings are the same. Follow step 18 on Page 14 if adjustment is needed.

MEASURING EXAMPLES

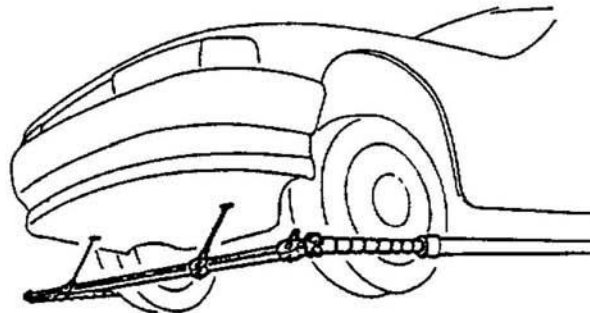
Measuring strut towers.
Remember that the measuring pins are three dimensional showing exactly the same point left and right from centerline.



Measure headlight mounting points.

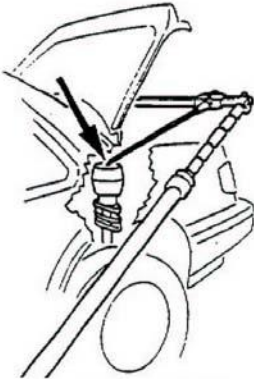


Measure front rails, cross members, and core support.
Choose symmetrical points.

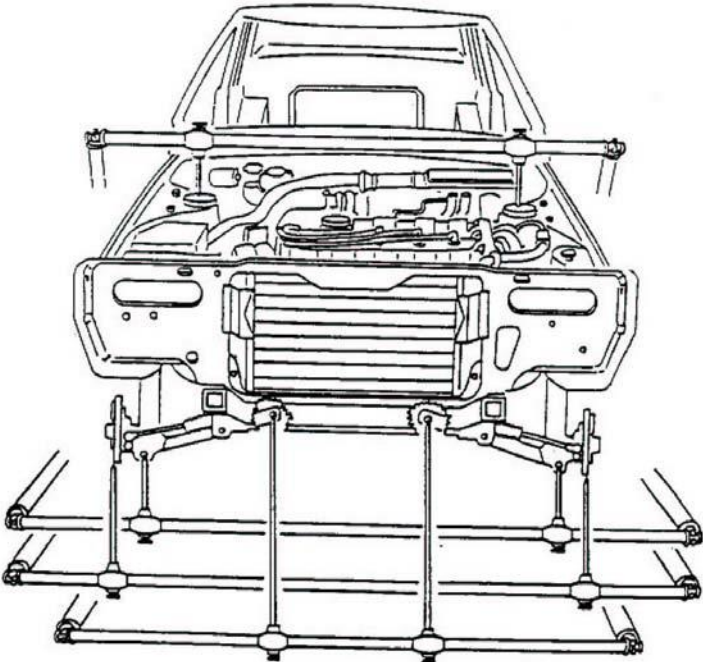


MEASURING EXAMPLES (cont'd)

Measure rear strut locations by reaching in through the trunk opening with long pointer pins.

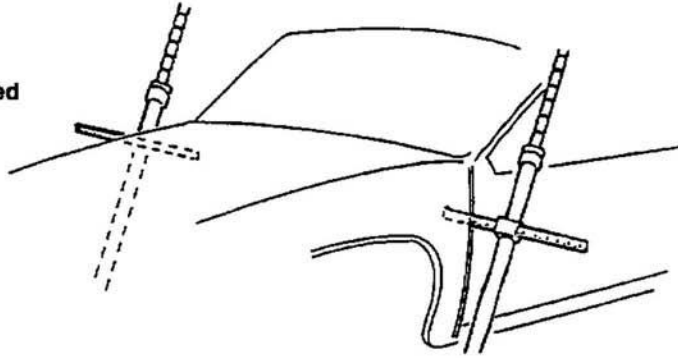


Measure different suspension points for any misalignment, even the rack and pinion.

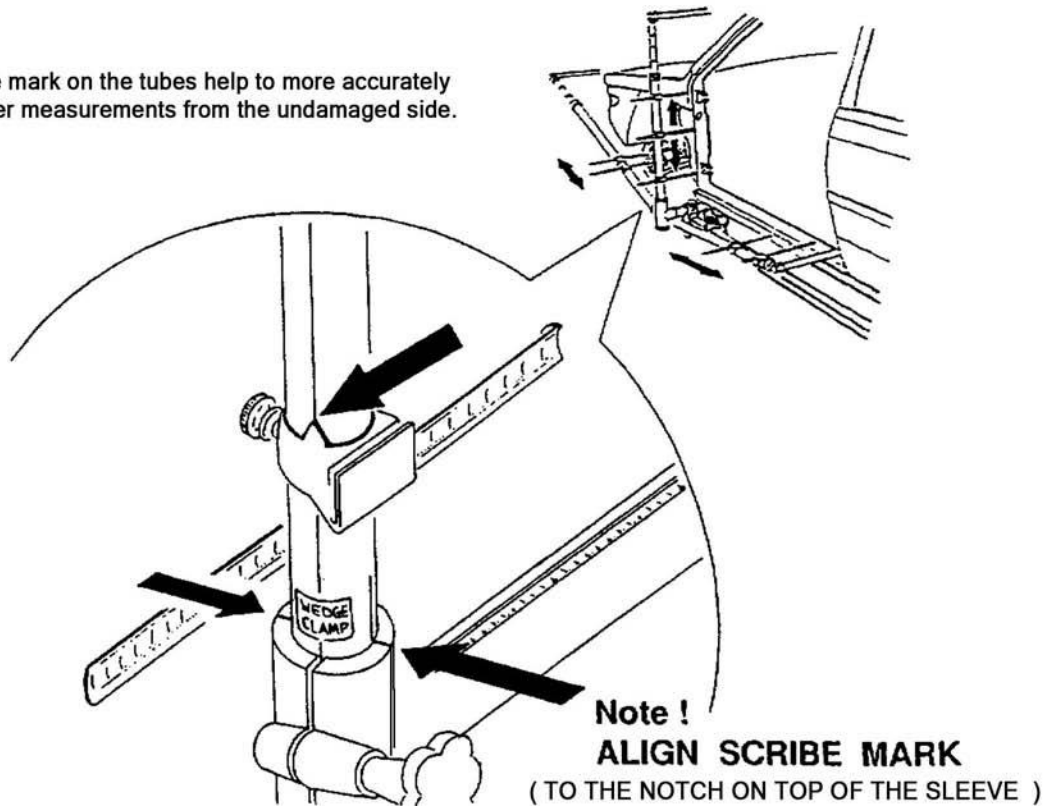


MEASURING EXAMPLES (CONTINUED)

Take measurements from the **undamaged** side and use them on the damaged side to have exact targets to pull to. The side tapes can fit through the door gap on the undamaged side to reach the post and hinge locations.

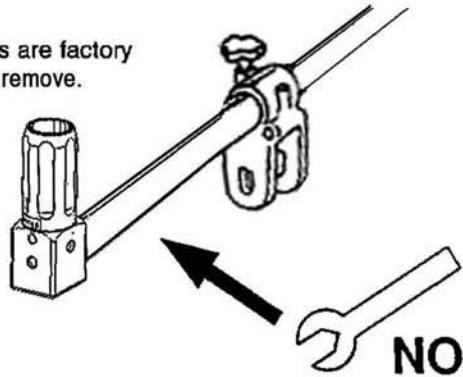


Scribe mark on the tubes help to more accurately transfer measurements from the undamaged side.

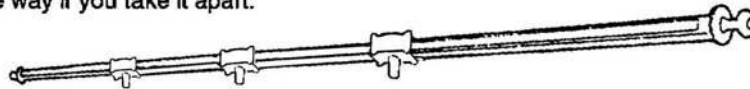


IMPORTANT INFORMATION

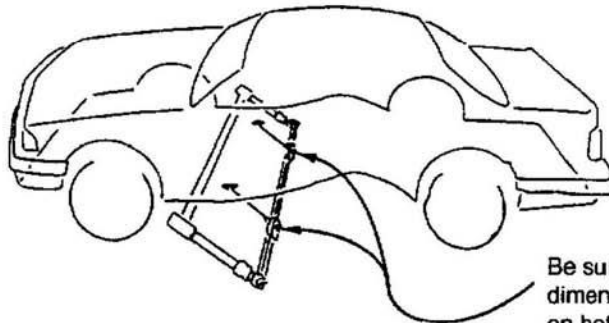
These pivot tube elbows are factory calibrated. Do not try to remove.



Measuring pin slides are factory calibrated and machined. Put it back the **same** way if you take it apart.



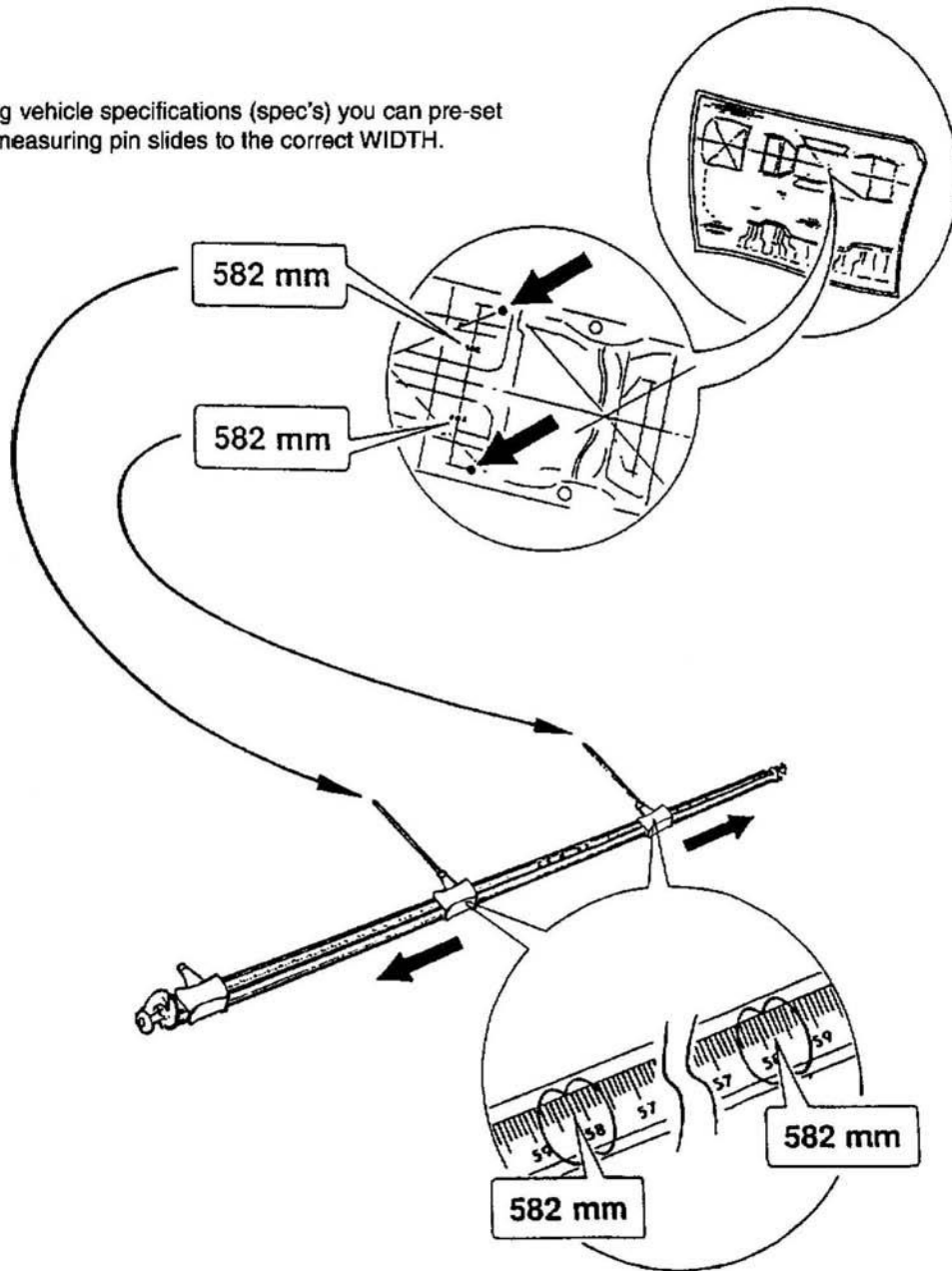
If the pinchwelds are damaged always check CENTERING and SQUARENESS to symmetrical control points. Use the short side extension tubes.



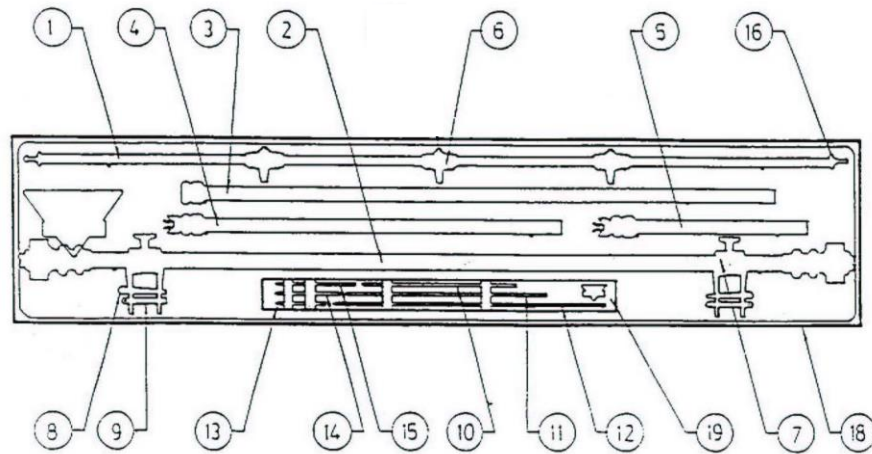
Be sure that the **WIDTH** dimensions are the same on both sides.

USING WIDTH DIMENSIONS

Using vehicle specifications (spec's) you can pre-set the measuring pin slides to the correct WIDTH.



REPLACEMENT PART LIST



Part No. Description

- | | | |
|-----|-------|---|
| 1. | 19120 | Measuring Crossbar Assembly |
| 2. | 19050 | Pivot Tube Assembly (19150 – Extended) |
| 3. | 15306 | Long Side Tube (outer) |
| 4. | 11026 | Medium Side Tube (inner) |
| | 11027 | Medium Side Tube (outer) |
| 5. | 15323 | Short Side Tube (outer) |
| | 15324 | Short Side Tube (inner) |
| 6. | 19019 | Pin Slide Assembly |
| 7. | 15350 | Wedge Bracket Assembly – Left (15355 – Right) |
| 8. | 11031 | Aluminum Wedge |
| 9. | 11032 | Plastic Pin |
| 10. | 15321 | (355mm) 14" Measuring Pin |
| 11. | 15322 | (546mm) 21 ½" Measuring Pin |
| 12. | 11028 | (685mm) 27" Measuring Pin |
| 13. | 11030 | (140mm) 5 ½" Measuring Pin |
| 14. | 15320 | (203mm) 8" Measuring Pin |
| 15. | 11029 | (279mm) 11" Measuring Pin |
| 16. | 11056 | "O" Ring |
| 18. | 19001 | Tool Board |
| 19. | 15311 | Pin Holder Board |