23 RA

Adjusting Rear Wheel Suspension

Special Tools:

VW 245a Protractor

The correct adjustment of the torsion bar may be obtained by measuring the angle of the radius arm with respect to the horizontal position of the automobile. The radius arm must be unloaded.

Make sure the chassis is level by placing the protractor VW 245a on the floor tunnel. The unloaded radius arm should give the following reading:

Vehicle type 356 B 1600, 1600 S (without compensating spring)

Coupe, Cabriolet/Hardtop
16° 30'

Roadster
14° 30'

Vehicle type 356 B 1600 S-90 (with compensating spring)

Coupe, Cabriolet/Hardtop
15° 30'

Roadster
13° 30'

These values are valid for cars with compensating springs which where not orignial equipment.

Vehicle type 356 B 1600 GS (with compensating spring)

12° to 13°
Camber: – 0.5° to – 1.5°

To insure proper radius arm travel as well as road-holding qualities of the automobile, the adjustment of both radius arms should be identical. When adjusting one side, always check the other and correct if necessary.

The adjustment is made as follows:

1. Install torsion bar so that its splines engage the socket in the frame.
2. Install radius arm on outer end of torsion bar.
3. Place protractor VW 245a on unloaded radius arm.
4. Adjust pendulum on protractor so that the level is horizontal.

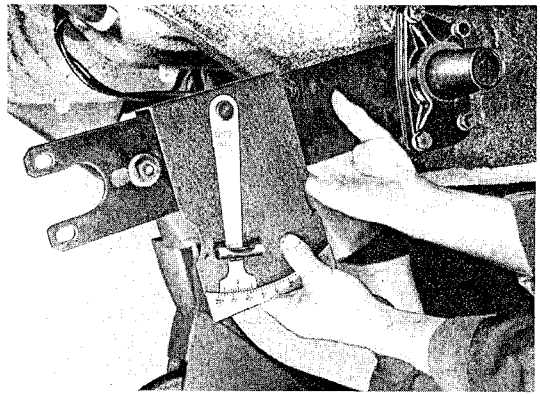

Fig. 137

If the protractor shows a noticeable variation between the actual angle of radius arm and the specified angle, the position of the radius arm should be corrected. The different number of splines on either end of the torsion bar permits such an adjustment. The number of splines are:

Inner end: 40 splines
Outer end: 44 splines

When the inner end of the torsion bar is advanced one spline it turns 9°. When the radius arm is moved one spline it gives a change of 8° 10'. As a result the minimum adjustment of the radius arm is 0° 50'. If this procedure does not result in the same radius arms inclination on both sides of the vehicle, the adjustment must be repeated with a different radius arm.

The adjustment of the right and left radius arms may vary up to ± 30'. Depending on right-hand or left-hand drive, the greater angle should be on the driver side.

Note

Correct adjustment of the rear wheels can be obtained only on an optical alignment device. (See Group W — Wheel Alignment.)