

Parking brake linkage

Introduction

The parking brake is operated by a foot pedal application with a hand pull release.

The mechanism operates a caliper lever arrangement fitted beneath the two rear hydraulic brake calipers. These levers apply a wedge shaped friction pad to each side of the brake disc.

The parking brake should be inspected for wear and manually adjusted at the intervals specified in the Service Schedule Manual TSD 4702.

Pads must be renewed when the friction material has worn to within 3,18 mm (0.125 in) of the pad backplates.

Foot operated parking brake mechanism – To remove

1. Place the car on a ramp. Securely chock the road wheels. Release the parking brake.
2. At the intermediate linkage on the underside of the body, unhook the parking brake return spring from the operating lever. Remove the clevis pin attaching the front brake cable to the lever (see fig. G20-1).
3. Remove the lower trim panel from the parking brake area as described in Chapter S in order to gain access to the two setscrews and the two studs, which retain the foot pedal mechanism in position.
4. Disconnect the Lucar connectors from the micro-switch.
5. Disconnect the brake cable from the cable connector attached to the pedal lever.
6. Remove the two setscrews and two nuts that retain the mechanism in position. Lower the mechanism from beneath the fascia.

Foot operated parking brake mechanism – To dismantle (see fig. G20-2)

1. Remove the foot operated parking brake mechanism as described previously.
2. Remove the side plates guard from the mechanism assembly, taking care not to damage the clipping tabs.
3. Remove the micro-switch.
4. Remove the cable connector from the pedal lever by removing a circlip from one end of the pin. Withdraw the pin.
5. Remove the sprag plate stop by removing the setscrew and the self-tapping screw.
6. Straighten the tension spring split pin. Withdraw the pin from the sprag plate to release the spring.
7. Remove the sprag plate by removing the circlips and washers from the pivot pin. Withdraw the pivot pin from the mechanism to release the sprag plate. Withdraw the sprag plate from the sprag rod.
8. Disconnect the sprag rod from the pedal lever by removing one of the retaining circlips from the pivot pin. Withdraw the pivot pin from the sprag rod and pedal lever.

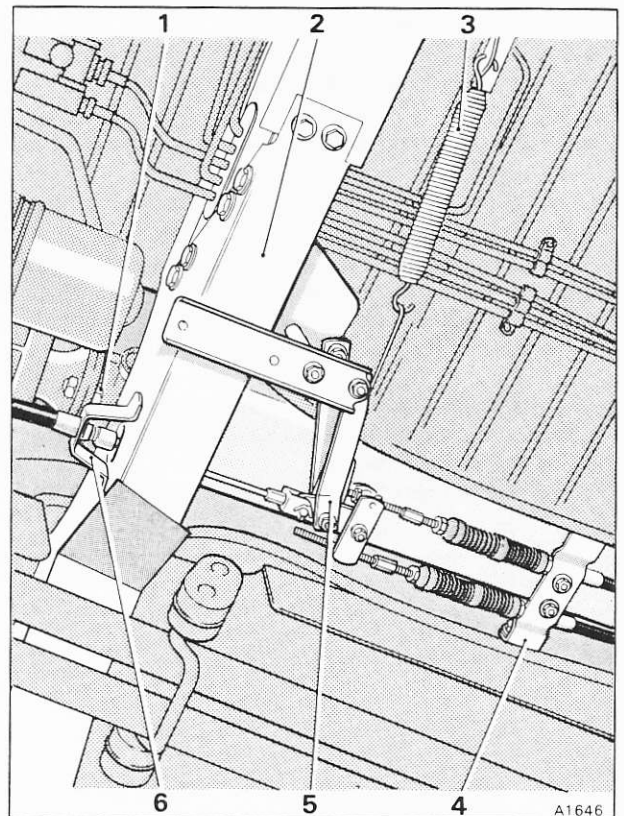


Fig. G20-1 Parking brake intermediate linkage

- 1 Propeller shaft
- 2 Centre body member
- 3 Return spring
- 4 Abutment bracket – rear brake cables
- 5 Operating lever
- 6 Mounting bracket – front brake cable

Note The following operation is only necessary if damage to the pedal lever is evident.

9. Carefully drill out the pedal lever pivot pin to release the pedal lever from the two side plates. Withdraw the pedal lever from the assembly.

Note If the release handle and rod are not damaged and operate correctly the following operations are not necessary.

10. Remove the Starlock fixing clip and spire linkage clip from the longest release handle slide rod.
11. Remove the split pin, washer, and spring from the shortest release handle slide rod. Carefully remove the release handle from the parking brake mechanism.

Foot operated parking brake mechanism – To assemble (see fig. G20-2)

Assemble the parking brake mechanism by reversing

the procedure given for dismantling, applying the following recommendations whilst noting that Operation 1 will only be necessary if the pedal lever needs to be replaced.

1. Position the pedal lever locating it with a new pin. Secure in place by rivetting over each end of the pin to grip the side plates.
 2. Sparingly smear the inside of the sprag plate pivot hole with Retinax 'A' grease or any suitable equivalent.
- Note** The sprag rod must be clean, dry, and free from lubricant.
3. Fit the sprag plate onto the sprag rod, securing in position with a retaining pin and circlips.
 4. Ensure that the cable connector cut-out is on the right-hand side when viewed from the front.
 5. Adjust the mechanism as described under Foot operated parking brake mechanism – To adjust.

Foot operated parking brake mechanism – To adjust

The following operations can be carried out with the unit removed from the car.

1. Slowly depress the pedal from the 'off' position

through its travel. The sprag plate will move forwards from its 'off' position for the first part of its travel and then move backwards towards the stop plate.

2. The sprag plate stop must be set with a clearance of 0,6 mm (0.025 in) between itself and the sprag plate when the pedal is in the full 'on' position. Torque tighten the locking setscrew on the stop in accordance with the figures quoted in Chapter P. Also tighten the self-tapping screw.
3. With the pedal mechanism in the 'off' position adjust the micro-switch so that it is depressed, tighten the setscrews.
4. To check that the micro-switch is functioning correctly move the pedal away from the 'off' position. The switch should be heard to 'click' on and then 'off' with the reverse movement, adjust as necessary.

Foot operated parking brake mechanism – To fit

Fit the foot operated parking brake unit by reversing the removal procedure noting the following.

1. All setscrews and nuts should be torque tightened to the figures quoted in Chapter P.
2. Care should be taken to ensure that the brake

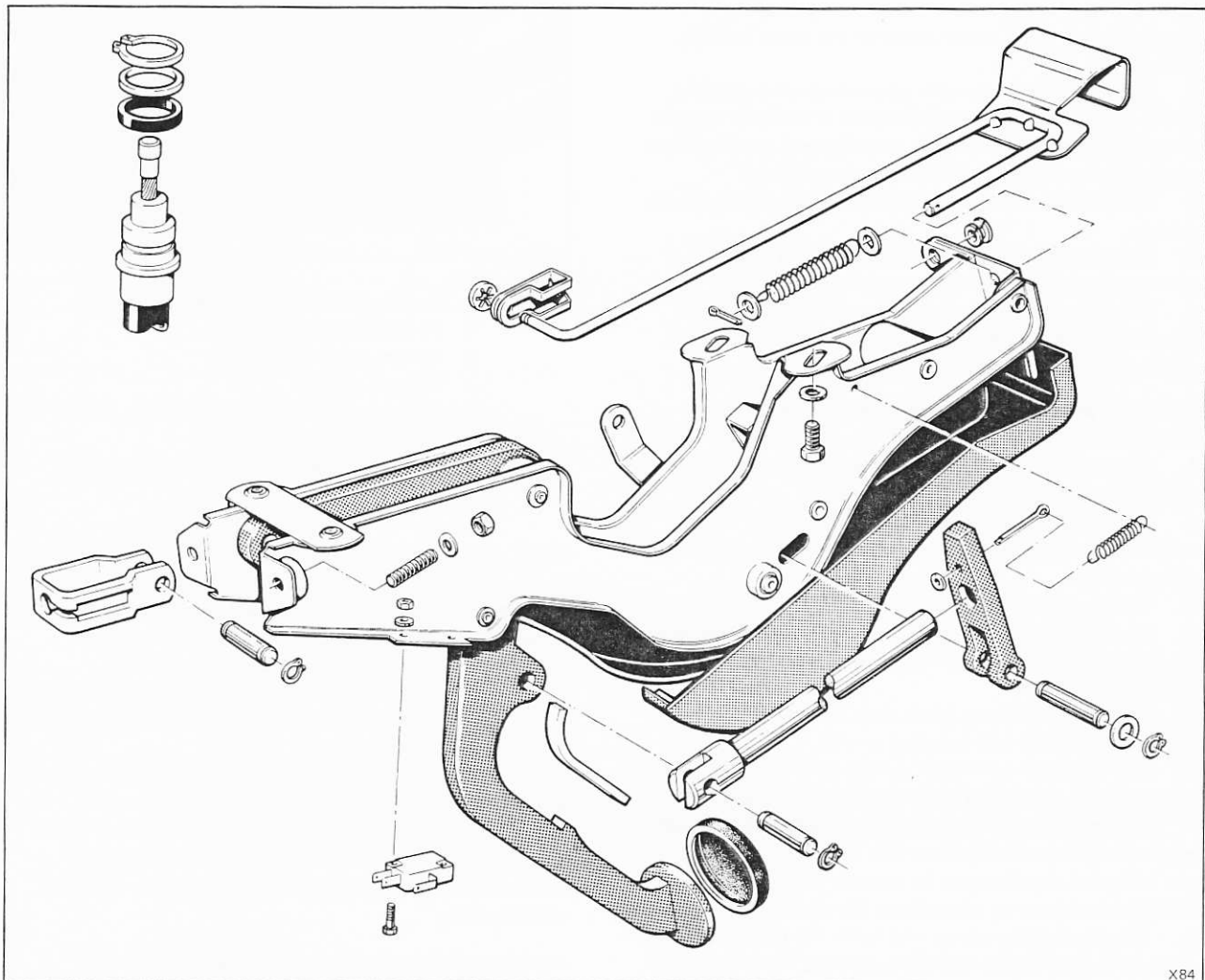
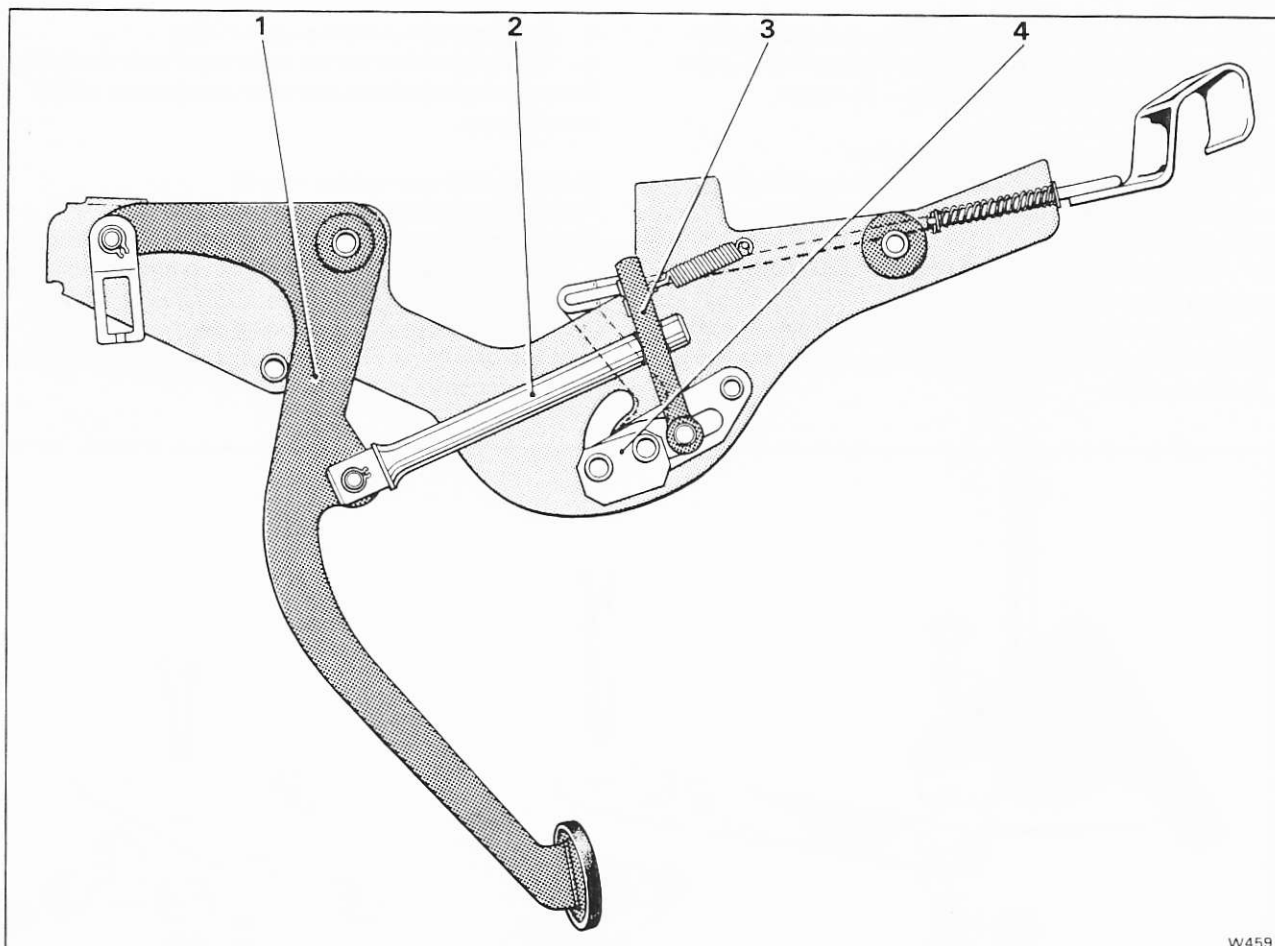


Fig. G20-2 Foot operated parking brake and cable connection



W459

Fig. G20-3 Foot operated parking brake adjustment components

- | | |
|--------------|---------------------|
| 1 Foot pedal | 3 Sprag plate |
| 2 Sprag rod | 4 Release mechanism |

cable end is located correctly in the connector link of the unit.

Foot operated parking brake mechanism – To check

1. Check the movement of the release handle, as it should not foul the trim at any point during its full travel. If it does foul **do not** bend the slide rods, reposition the complete unit.

If the slide rods are bent, the handle slide rod assembly must be removed and a new one fitted. Refer to, Foot operated parking brake mechanism – To dismantle.

2. With the parking brake pads 'bedded-in', cables and linkages adjusted, depress the pedal fully and pull the release handle gently. If the pedal does not release check the sprag plate stop setting. Refer to, Foot operated parking brake mechanism – To adjust.

Parking brake front cable – To remove

1. Carry out Operations 1 and 2 of Foot operated parking brake mechanism – To remove.
2. Disconnect the front end of the brake cable from the cable connector which is attached to the pedal lever.

3. Remove the circlip retaining the outer cable to the body floor below the foot pedal mechanism.
4. Disconnect the rear end of the outer cable from the support bracket on the centre crossmember of the body.
5. Disconnect the clip securing the cable to the bracket on the transmission sump.
On left-hand drive cars disconnect the clip securing the cable to the throttle cross-shaft bracket.
6. Remove the cable from the car.

Parking brake front cable – To fit

Fit the parking brake front cable by reversing the procedure given for removal noting the following.

1. On right-hand drive cars ensure that the cable passes between the transmission casing and throttle lever.
2. All setscrews and nuts should be torque tightened in accordance with the figures quoted in Chapter P.
3. Lubricate the clevis pin with Rocol MTS 1000 grease or any suitable equivalent.
4. Check for freedom of operation during the application and release of the parking brake. The parking brake should operate freely without



roughness or binding throughout its entire operation.
5. Adjust the cables and calipers as described under Parking brake cables and calipers – To adjust.

Parking brake rear cables – To remove

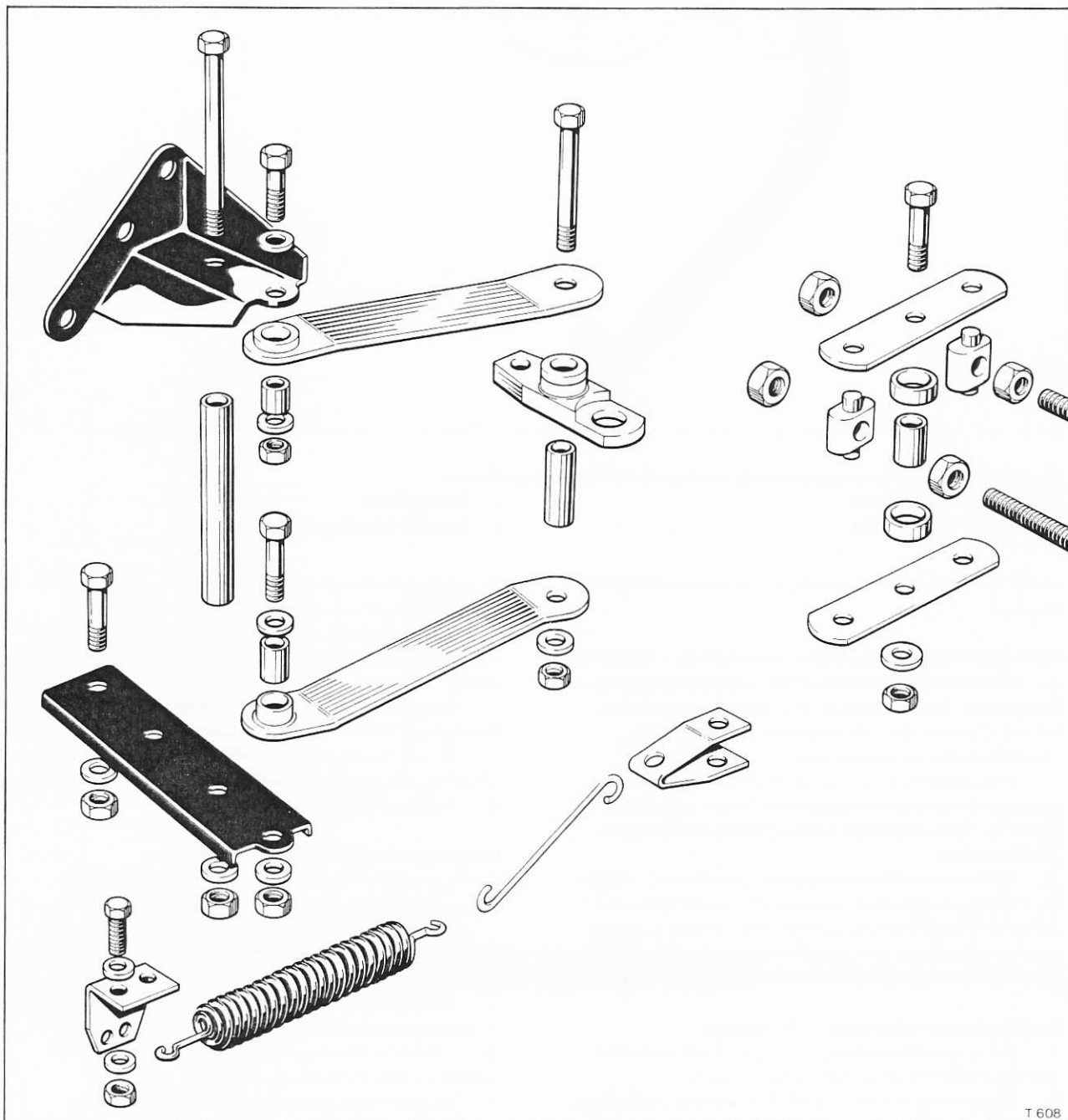
1. Disconnect the rear cables at the equalizer fitted to the intermediate linkage on the centre body crossmember.
2. Disconnect the rear end of each cable from the parking brake caliper mechanism.
3. Remove the two centre bolts from the abutment bracket at the front end of the cables; collect the top clamping plate.

4. Disconnect the cable support clips.
5. Carefully withdraw the right-hand rear cable from beneath the heatshield and then remove the cables from the car.

Parking brake rear cables – To fit

Fit the parking brake rear cables by reversing the procedure given for removal noting the following.

1. All setscrews and nuts should be torque tightened in accordance with the figures quoted in Chapter P.
2. Lubricate the clevis pins and cable adjustment threads with Rocol MTS 1000 grease or any suitable equivalent, prior to fitting.



T 608

Fig. G20-4 Parking brake intermediate linkage

3. Check the freedom of operation during the application and release of the parking brake. The parking brake should operate freely without roughness or binding throughout its operation.
4. Ensure that the cables are correctly located in the cable support clips and can move freely through them. Also, ensure that the cables are routed above the lower tube of the rear suspension space frame.
5. Adjust the cables as described under Parking brake cables and calipers – To adjust.

Parking brake cables and calipers – To adjust

Before any adjustments are made to the parking brake rear cables the caliper on each rear wheel should be set as follows.

1. Remove the clevis pin connecting the brake cable to the actuation lever.
2. Disconnect the actuation rod from the actuation lever.
3. Check and adjust if necessary the length of the actuation rod, to obtain a measurement of 57 mm (2.250 in) between the exposed face of the jaw lock-nut and the face of the opposite jaw.
4. Position the rod onto the actuation lever; fit the clevis pin, waved washer, and split pin. Lubricate the clevis pin with Rocol MTS 1000 grease or any suitable equivalent.
5. Ensure that the parking brake caliper is on its 'off stop'. Check that the clearance (see fig. G20-5, point A) between the washer on the spring guide rod and the spring abutment bracket is approximately 6 mm (0.250 in) at the point of minimum clearance. Bend the abutment bracket as necessary.

Note The washer fitted to the end of the spring guide rod must not act as the parking brake 'off stop' as this will cause caliper pad misalignment.

6. Connect the rear brake cable to the actuation lever.
7. Ensure that the parking brake is in the fully 'off' position. Adjust the rear cables at the equalizer on the intermediate linkage until the caliper 'off stops' are just clear of the caliper. Measure the gap beneath each 'off stop' and lengthen the cables at the adjusters by this amount.

Note The cables must be adjusted so that the equalizer transverse link lies at right-angles to the centre line of the car with the parking brake in the 'off' position.

8. Raise each rear wheel in turn so that it is free to rotate. Turn the caliper adjuster clockwise until the parking brake pads grip the brake disc. At this point it should only just be possible to rotate the wheel by hand. Turn the adjuster anti-clockwise a quarter turn (three clicks on the nut) to obtain minimum clearance between the pads and disc.
9. Ensure that the centralizing straps are forcing the pads away from the disc when the parking brake is in the 'off' position. If not, remove the retaining bolt securing the straps; bend the straps outwards then re-assemble.
10. When new brake pads have been fitted carry out

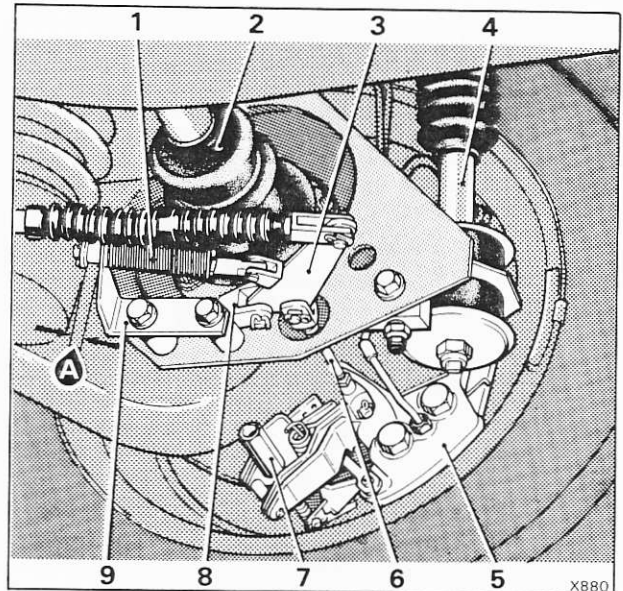


Fig. G20-5 Parking brake caliper and cable adjustment

- 1 Guide rod and return spring
- 2 Drive-shaft
- 3 Actuation lever
- 4 Suspension strut
- 5 Brake caliper
- 6 Actuation rod
- 7 Caliper adjuster
- 8 Mounting bracket
- 9 Spring abutment bracket

the pad bedding operation as described under Parking brake pads – To 'bed-in'.

Parking brake pads – To renew (see fig. G20-6)

1. Securely chock the front wheels.
2. Raise the rear of the car. Place sill blocks under the rear end of the body sills. Support the trailing arms; do not allow the suspension struts to support the full suspension load.
3. Remove the rear wheels.
4. Release the parking brake to the 'off' position.
5. Disconnect the caliper actuation rod from the caliper lever.
6. Unscrew and remove the caliper adjuster. Collect the adjuster clicker block.
7. Unhook the pad retention springs from each brake pad; note that the larger spring is fitted to the inner parking brake pad.
8. Lift out the parking brake pads from the caliper and remove the retention springs.
9. Fit the springs to the new pads, then locate the pads in position. Hook the springs onto the caliper levers.
10. Complete the assembly by reversing the removal procedure. Adjust the calipers and cables as described under Parking brake cables and calipers – To adjust.

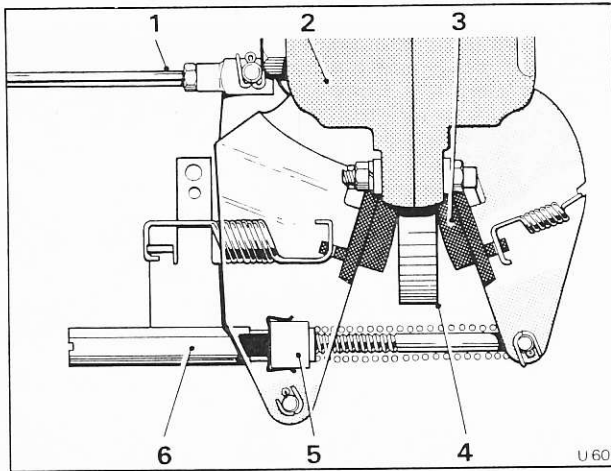


Fig. G20-6 Parking brake caliper

- 1 Actuation rod
- 2 Brake caliper
- 3 Parking brake pads
- 4 Brake disc
- 5 Adjuster clicker block
- 6 Adjuster

Parking brake pads – To 'bed-in'

When new parking brake pads are fitted to the car the following 'bedding-in' procedure should be carried out.

1. Drive the car at 48 km/h (30 mile/h) and apply the parking brake to bring the car to rest. The parking brake should be applied in such a way that the retardation of the car is constant without locking the wheels. This operation should be carried out nine times, allowing at least one minute to elapse between applications to prevent overheating.
2. Readjust the parking brake caliper as described in Operation 8 of Parking brake cables and calipers – To adjust.