A. 45-62 b

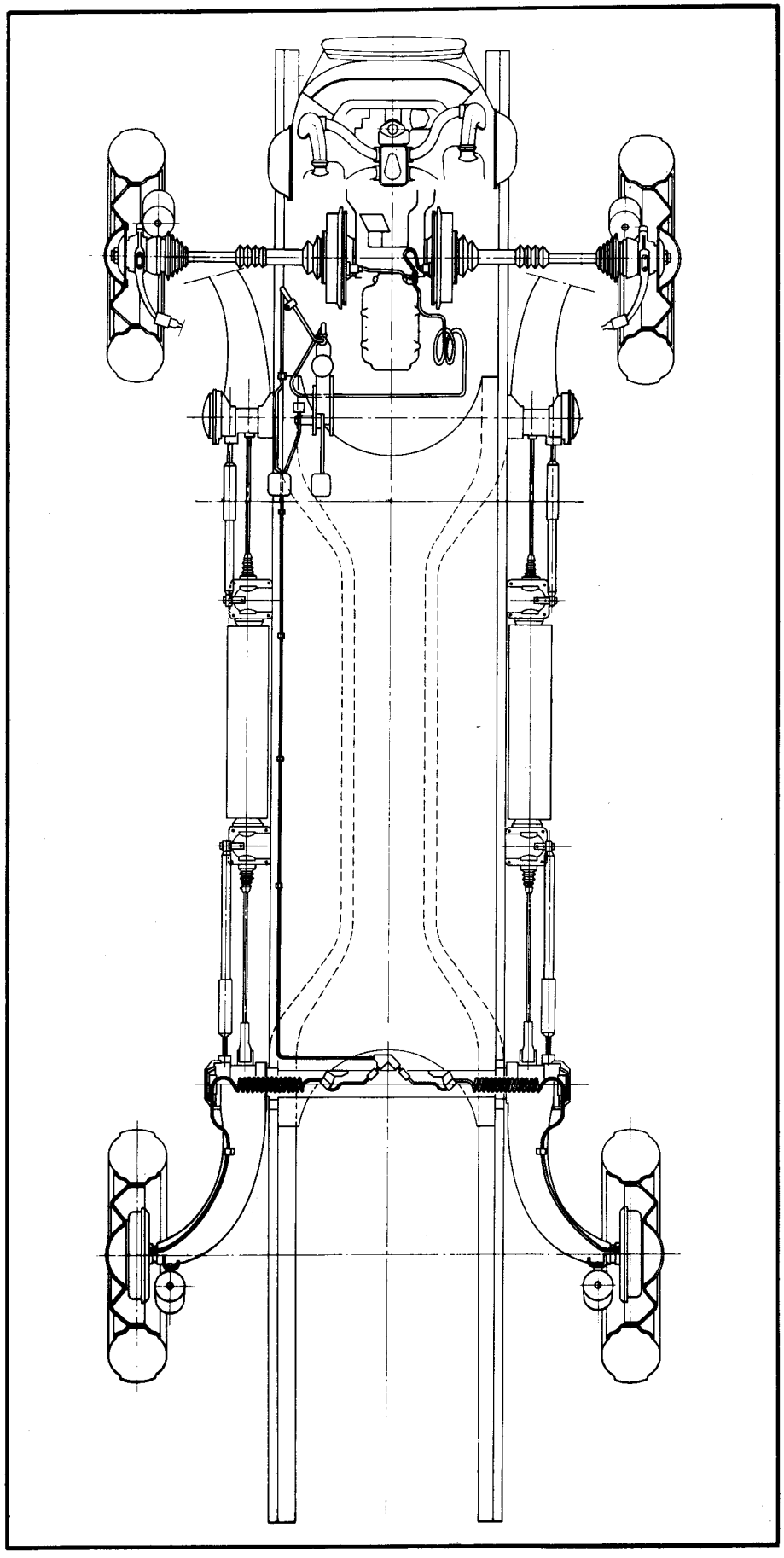


DIAGRAM OF THE BRAKING SYSTEM

Supplement No. 1 to Manual 816-1 (CORR.)

CHARACTERISTICS

Master cylinder - Wheel cylinders :

Master cylinder and wheel cylinders fitted to **AZ** *and* **AZU** *vehicles :*

Type of vehicle	Diameter of master cylinder in mm (in)	Diameter of wheel cylinders in mm (in)	
		Front	Rear
AZ ⟶ *2/1970*	22 (0.86)	25.5 (1.00)	19 (0.74)
AZ (2 CV 4) AZ (2 CV 6) *7/1970 ⟶ 6/1973*	20.6 (0.81)	28.57 (1.12)	17.5 (0.68)
AZ (2 CV 4) AZ (2 CV 6) *7/1973 ⟶ 10/1976*	19 (0.74)	28.57 (1.12)	17.5 (0.68)
AZU ⟶ *1/1972*	22 (0.86)	28.57 (1.12)	19 (0.74)
AZU *2/1972 ⟶ 6/1973*	20.6 (0.81)	28.57 (1.12)	17.5 (0.68)
AZU *7/1973 ⟶ 10/1976*	19 (0.74)	28.57 (1.12)	17.5 (0.68)
AZ and AZU *10/1976 ⟶ 9/1978* *	20.6 (0.81)	28.57 (1.12)	17.5 (0.68)

Master cylinder and wheel cylinders fitted to **DYANE** *vehicles :*

AYA *8/1967 ⟶ 3/1968* AYA 3 *1/1968 ⟶ 10/1968* AYA 2 *3/1968 ⟶ 2/1970*	20.6 (0.81)	28.57 (1.12)	19 (0.74)
AYA 2 *2/1970 ⟶ 6/1973* AYB *10/1968 ⟶ 6/1973* MEHARI *9/1968 ⟶ 6/1973*	20.6 (0,81)	28.57 (1.12)	17.5 (0.68)
AYA 2 AY-CB MEHARI *7/1973 ⟶ 10/1976*	19 (0.81)	28.57 (1.12)	17.5 (0.68)
AYA 2 AY-CB MEHARI *10/1976 ⟶ 7/1977* *	20.6 (0.81)	28.57 (1.12)	17.5 (0.68)

Master cylinder and wheel cylinders fitted to **AK** *vehicles :*

AK ⟶ *5/1968*	22 (0.86)	28.57 (1.12)	19 (0.74)
AK *5/1968 ⟶ 6/1973*	20.6 (0.81)	28.57 (1.12)	19 (0.74)
AK *7/1973 ⟶ 10/1976* *10/1976 ⟶ 2/1978* *	19 (0.74) 20.6 (0.81)	28.57 (1.12) 28.57 (1.12)	17.5 (0.68) 17.5 (0.68)

Master cylinder and wheel cylinders fitted to **AM** *vehicles :*

AM ⟶ *9/1969*	20.6 (0.81)	28.57 (1.12)	17.5 (0.68)
AMB ⟶ *9/1969*	20.6 (0.81)	28.57 (1.12)	19 (0.74)

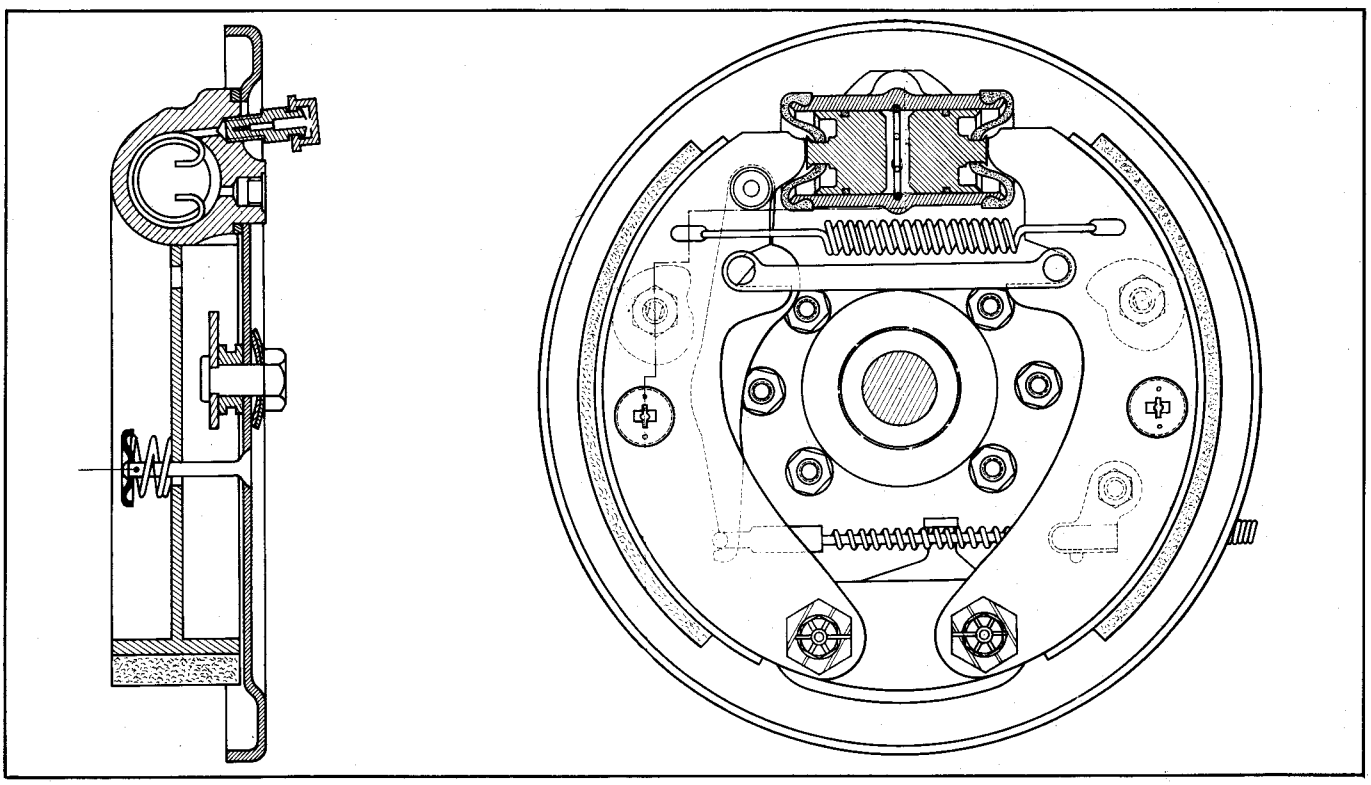
Master cylinder, calliper piston and wheel cylinders fitted on **AM, AY and AZ vehicles with disc brakes at the front :** *(LHM green fluid) :*

Type of vehicle	Diameter of master cylinder in mm (in)	Dia. of front calliper piston in mm (in)	Dia. of rear wheel cylinder in mm (in)
All AM Saloons *9/1969 ⟶ 10/1976* *10/1976 ⟶ 9/1978* *	17.5 (0.68)	42 (1.65)	16 (0.62)
All AM Estates *9/1969 ⟶ 10/1976* *10/1976 ⟶ 9/1978* *	17.5 (0.68)	42 (1.65)	17.5 (0.68)
AY CB (DYANE 6) AY CA (MEHARI) *7/1977 ⟶ ** AY CD (ACADIANE) *2/1978 ⟶ 10/1979* * AY CD (ACADIANE) with brake limiter *10/1979 ⟶ **	20.6 (0.81)	42 (1.65)	17.5 (0.68) 19 (0.74)
AZ KA (2 CV) *7/1981 ⟶ **	17.5 (0.68)	42 (1.65)	16 (0.62)

* Vehicles fitted with dual circuit master cylinder.

FRONT BRAKES

A.45-54



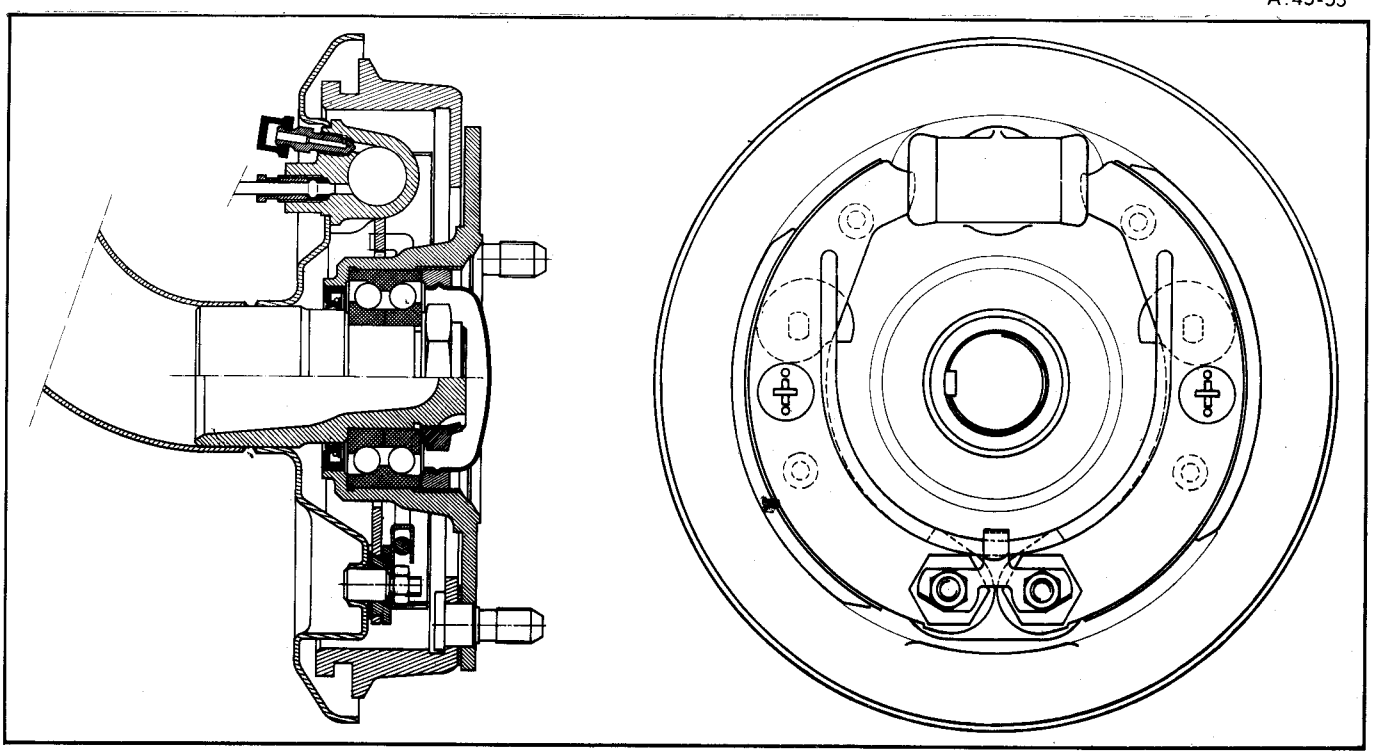
Drums :

Type of vehicle	Drum diameter in mm (in) Front	Drum diameter in mm (in) Rear	Braking surface in mm (in) Front	Braking surface in mm (in) Rear
AZ - 2 CV 4 - 2 CV 6 - AZU - AYA - AYA 2 - AYA 3	200 (7.87)	180 (7.08)	195.5 (30.3)	193.2 (29.92)
AK - AYB - MEHARI - AM - AM 2 - AM 3	220 (8.66)	180 (7.08)	354.6 (54.9)	193.2 (29.92)
◆ ACADIANE		180 (7.08)		193.2 (29.92)

- Maximum grinding of drums : . . . . . 2 mm (0.07 in)
- Maximum out of round : . . . . . 0.10 mm (.003 in)
- Thickness of linings : . . . . . 4.8 to 5.3 mm (0.18 to 0.2 in)

REAR BRAKES

A.45-53



Supplement No. 1 to Manual 816-1 (CORR)

Tightening torques :

- Nuts securing the brake backplates : ..... 3.8 to 4.2 da Nm (27.43 to 30.32 ft.lbs)
- Nuts securing the front brake drums (dia. = 7 mm (0.27 in) : ..... 2.5 da Nm (18.05 ft.lbs)
- Screws securing the front brake drums (dia. = 9 mm (0.35 in) : ..... 4.5 to 5 da Nm (32.4 to 36.1 ft.lbs)
- Nut securing the differential shaft ball bearing : ..... 12 to 14 da Nm (86.64 to 91.08 ft.lbs)
- Ring nut securing ball bearing in bearing block :
  - Old system *(ring nut in bearing block)* : ..... 10 to 12 da Nm (72.2 to 86.64 ft.lbs)
  - New system *(ring nut on bearing block)* : ..... 6 to 10 da Nm (43.32 to 72.2 ft.lbs)
- Nut for rear stub axle (face and threads greased) : ..... 35 to 40 da Nm (252.7 to 288.8 ft.lbs)
- Cap nut for rear hub bearing (face and threads greased) : ..... 35 to 40 da Nm (252.7 to 288.8 ft.lbs)
- Screwed unions on brake feed pipes : ..... 0.6 to 0.8 da Nm (4.33 to 5.77 ft.lbs)

PEDAL GEARS

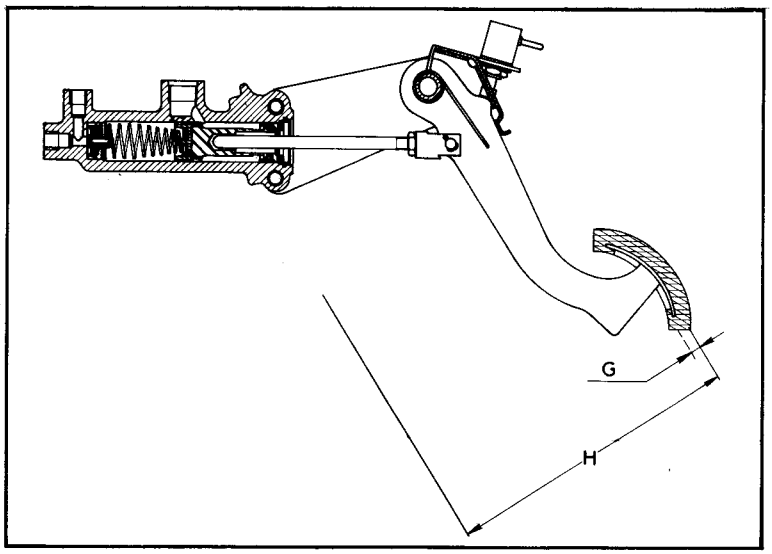
Adjustments :

- Safety clearance at master cylinder : ..... **J = 0.5 to 1 mm** (.019 to 0.039 in)
- Brake pedal clearance : ..... **G = 5 mm** (0.19 in)
- Stop lamp switch : the stop lamps should come on as soon as the master cylinder piston starts moving.

Height of pedals :

♦ - Pedal gear fitted on : AZ - AY - MEHARI - AK vehicles ⟶ *6/1973,* and on AM vehicles ⟶ *9/1969.*

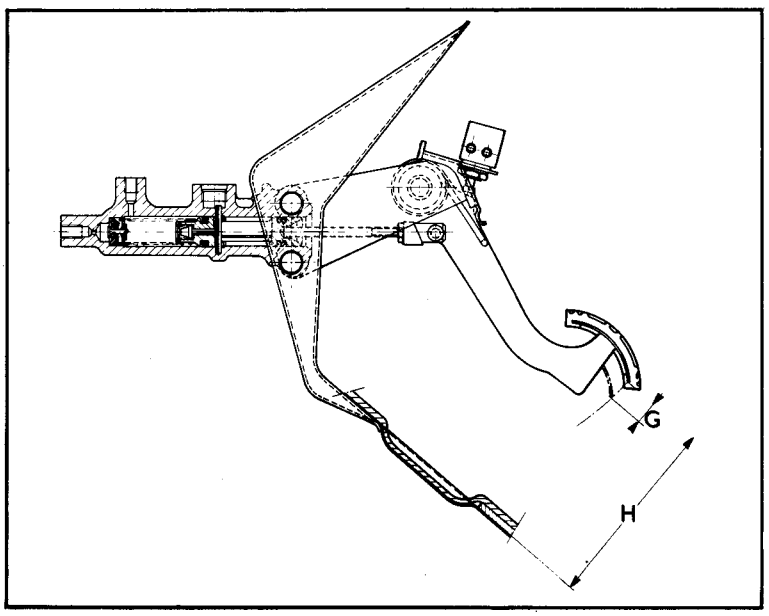
A.45-8 a



Pedal height : H = 130 ± 5 mm (5.11 ± 0.19 in) (measured between the upper part of the pedal pad and the floor « without carpet »).

♦ - Pedal gear fitted on : AZ - AY - MEHARI - AZU - AK *7/1973* ⟶ *10/1976.*

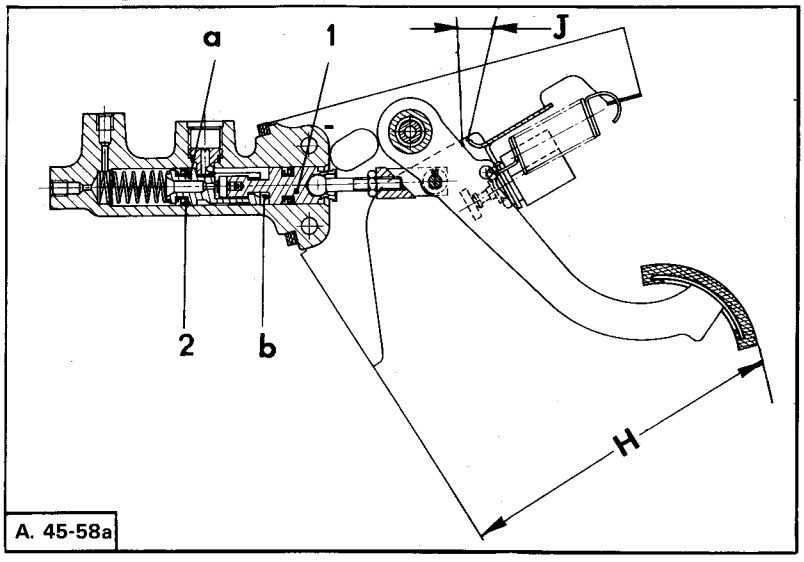
A.45-73



Pedal height : H = 130 ± 5 mm (5.11 ± 0.19 in) (measured between the upper part of the pedal pad and the floor « without carpet »).

PEDAL GEARS

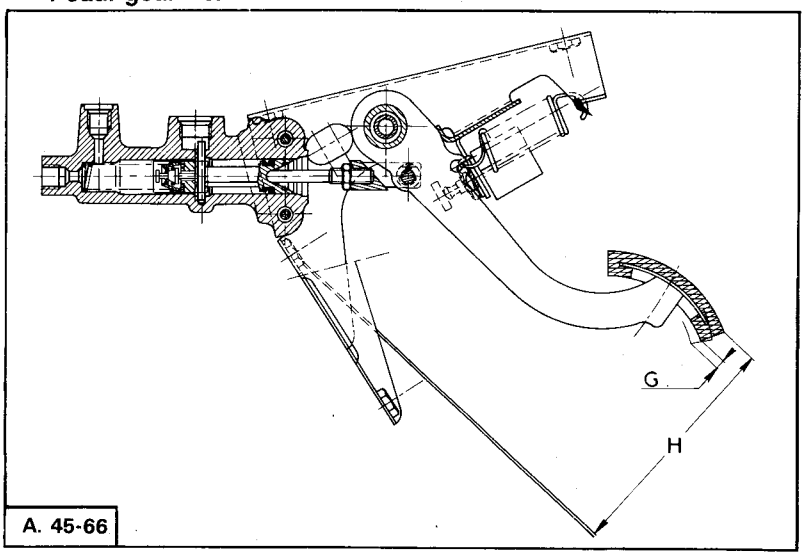
Pedal gear fitted on AM vehicles with disc brakes : *9/1969* ⟶ *10/1971.*



Provided that :
- piŝton 2 is resting on « a »,
- piston 1 is resting on « b »,
- and J = 2 mm (0.078 in),

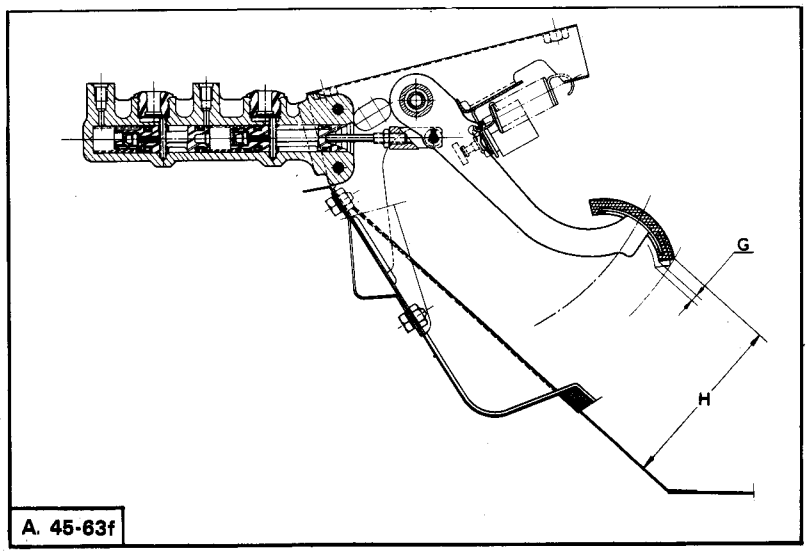
the height of the pedal, measured between the upper corner of the pad and the floor « without carpet », must be :
H = 125 ± 2.5 mm (4.92 ± 0.09 in)

Pedal gear fitted on AM vehicles with disc brakes : *11/1971* ⟶ *10/1976*



The height of the pedal, measured between the upper corner of the pad and the floor « without carpet » must be :
H = 135 ± 2.5 mm (5.31 ± 0.09 in)

Pedal gear fitted on AM vehicles with disc brakes and dual circuit : *10/1976* ⟶ *9/1978* :



The height of the pedal, measured between the upper corner of the pedal and the floor, «without carpet » must be :
H = 140 ± 5 mm (5.51 ± 0.19 in)

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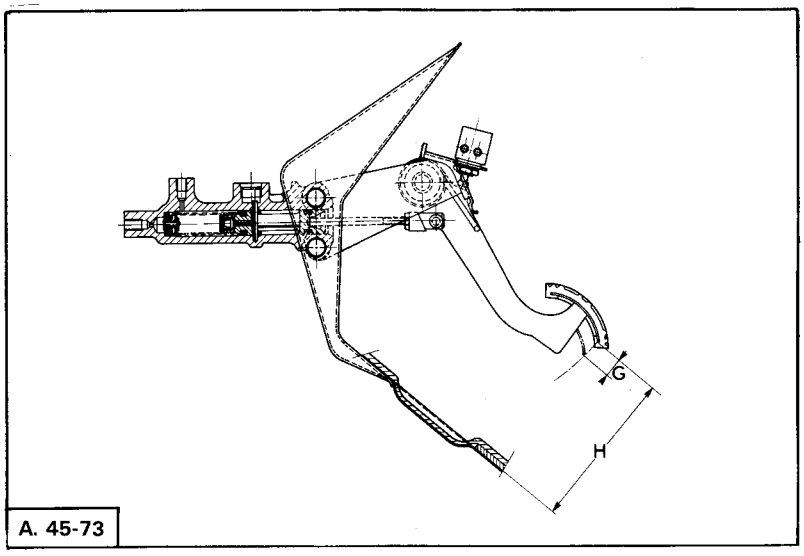
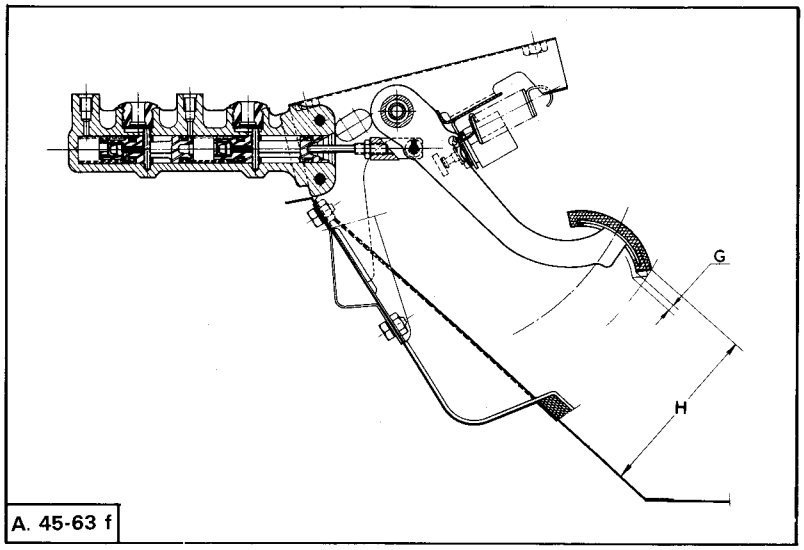
Pedal gear fitted on vehicles : AZ, AY MEHARI AZU and AK : *7/1973 ⟶ 10/1976*



A. 45-73

The height of the pedal, measured between the upper corner of the pad and the floor « without carpet », must be :
H = 130 ± 5 mm (5.11 ± 0.19 in)

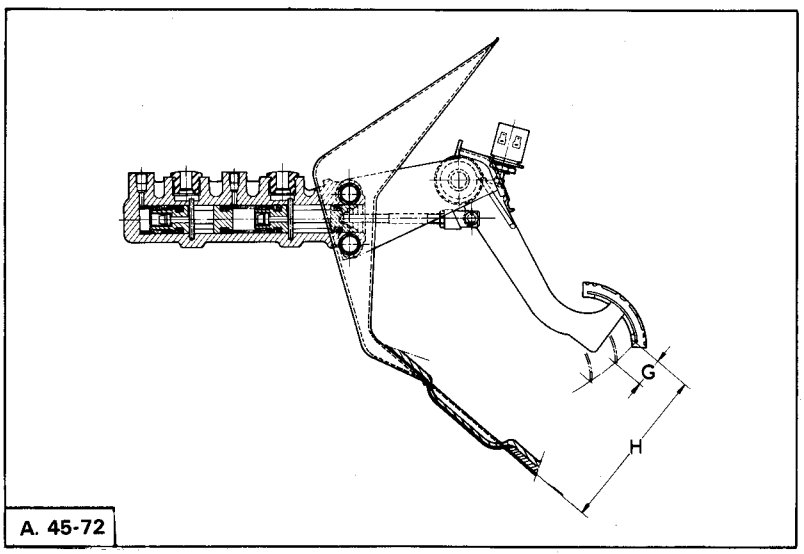
Pedal gear fitted on vehicles : AZ, *10/1976 ⟶ 7/1981* **- AY and MEHARI,** *10/1976 ⟶ 7/1977,* **AZU and AK,** *10/1976 ⟶ 2/1978*



A. 45-63 f

The height of the pedal, measured between the upper corner of the pad and the floor « without carpet », must be :
H = 131.5 ± 2.5 mm (5.17 ± 0.09 in)

Pedal gear fitted on vehicles : AY and MEHARI, *7/1977 ⟶* **- AY-CD,** *2/1978 ⟶* **- AZ,** *7/1981 ⟶*



A. 45-72

The height between the pedal and the floor must be :
H = 143 ± 4 mm (5.62 ± 0.15 in)

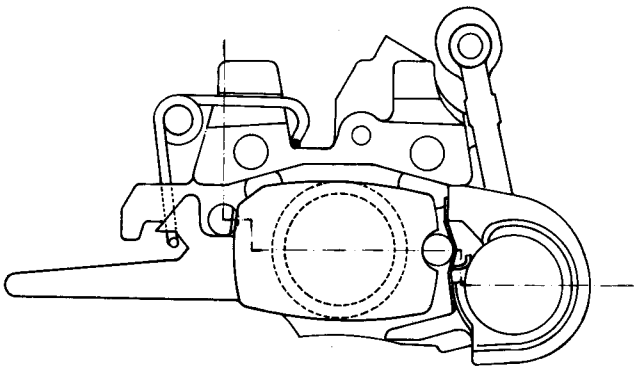
Tightening torques :

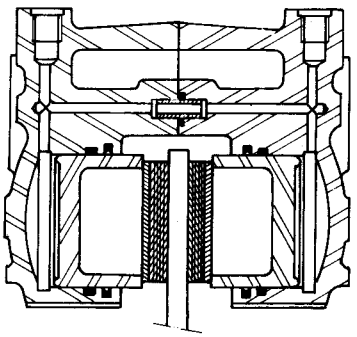
- Brake fluid reservoir : ..... 3.5 to 4.5 m.daN
- Nut for thrust rod : ..... 1 to 2.5 m.daN
- Master cylinder securing screw : ..... 1 m.daN

FRONT DISC BRAKE UNIT

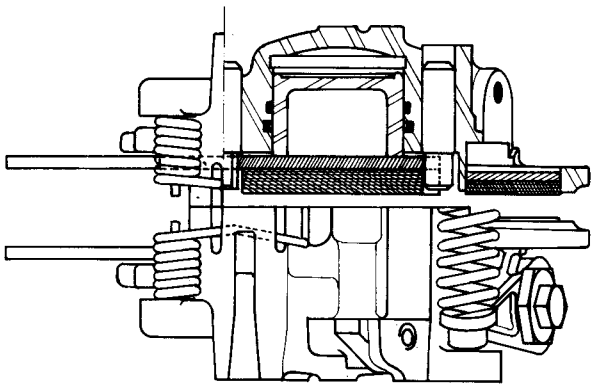
G.45-2

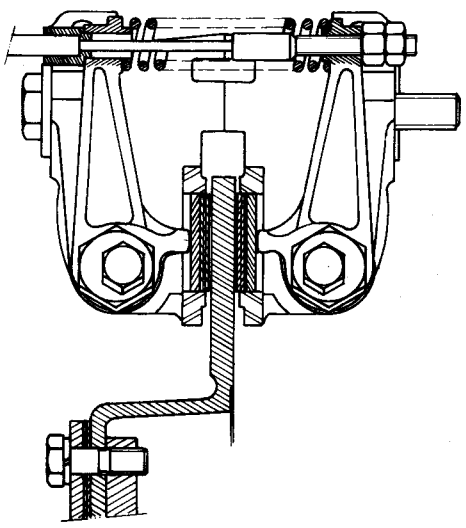
HYDRAULIC BRAKING SYSTEM





MECHANICAL BRAKING SYSTEM
(Handbrake)





Supplement No. 1 to Manual 816-1 (CORR.)

THE SPECIAL GREEN COLOURED LHM FLUID USED IN THE BRAKING CIRCUIT OF THIS VEHICLE IS, LIKE ENGINE OIL, A MINERAL-BASED FLUID.

THE USE OF ANY OTHER FLUID WOULD CAUSE COMPLETE DETERIORATION OF SEALING JOINTS AND RUBBERS.

THE APPROPRIATE PARTS FOR THIS VEHICLE ARE PAINTED OR MARKED WITH GREEN AND MUST WITHOUT FAIL BE REPLACED BY SIMILAR PARTS ALSO PAINTED OR MARKED WITH GREEN.

THESE PARTS ARE TO BE USED ON VEHICLES FITTED WITH DISC BRAKES ONLY.

CLEANING MAY BE CARRIED OUT WITH PETROL OR LEAD FREE PETROL. COMPRESSED AIR JETS MAY BE USED FOR DRYING. DO NOT USE ALCOHOL.

FRONT DISC BRAKES

CHARACTERISTICS

Brake disc :

- Disc diameter : ..... 244 mm (9.6 in)
- Original thickness : ..... 7 mm (0.27 in)
- Minimum thickness : ..... 4 mm (0 15 in)
- Maximum run-out : ..... 0.2 mm (.0078 in)

Brake unit :

- Piston diameter : ..... 42 mm (1.6 in)
- Position of brake unit in relation to the disc :
  - The joint faces of the half brake units must be in line with the centre plane of the disc face to within 0.5 mm (0.019 in).

Pads :

- Area of the main brake pad : ..... 22 sq. in. (3.41 sq.in.)
- Area of a hand brake pad : ..... 7 sq. in. (1.08 sq. in)
- Clearance between hand brake pads and disc : ..... 0.1 mm (.0039 in) (with max. run out of disc)

ADJUSTMENTS.

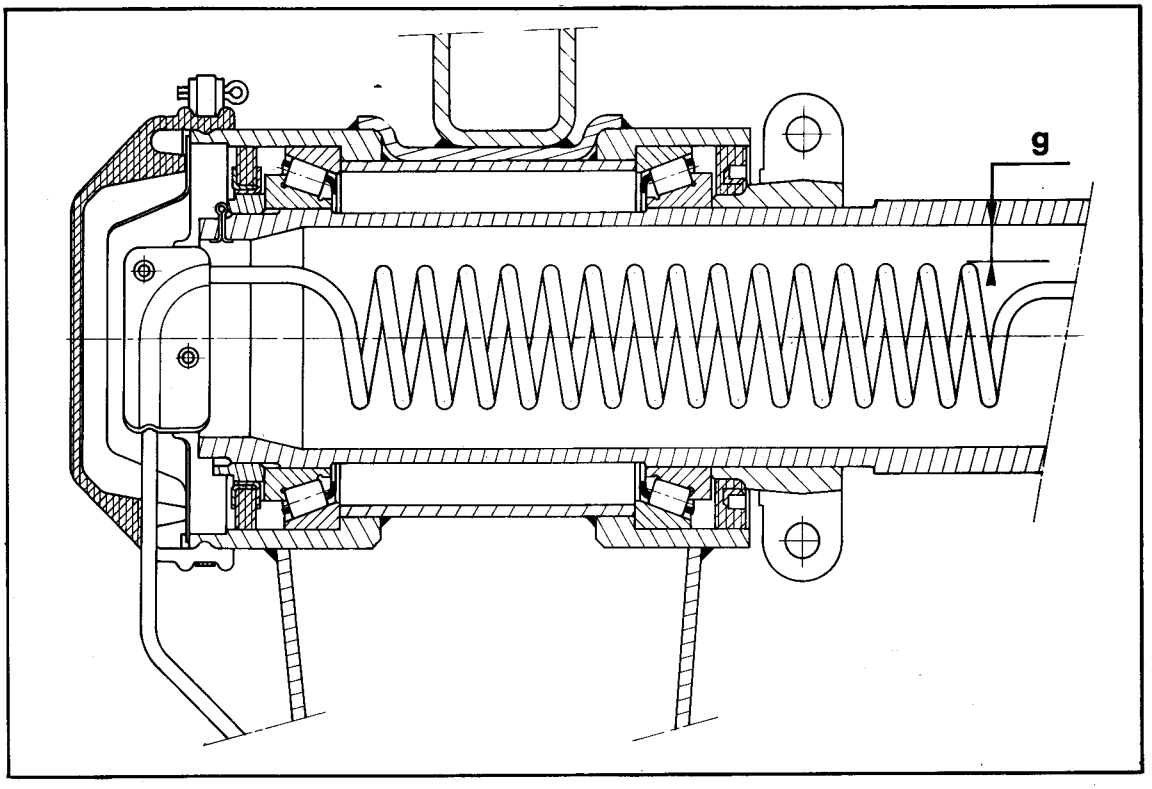
Tightening torques :

- Brake unit securing screws : ..... 4.5 to 5 da Nm (32.4 to 36.1 ft.lbs)
- Eccentric securing screws : ..... 4 da Nm (28.88 ft.lbs)
- Disc securing screws : ..... 4.5 to 5 da Nm (32.4 to 36.1 ft.lbs)
- Connecting nut for hydraulic pipes : ..... 0.8 to 0.9 da Nm (5.77 to 6.49 ft.lbs)
- Lock nut for hand brake cable : ..... 1.5 da Nm (10.83 ft.lbs)

REAR BRAKE FEED PIPE.

(New fitting)

A. 42-51



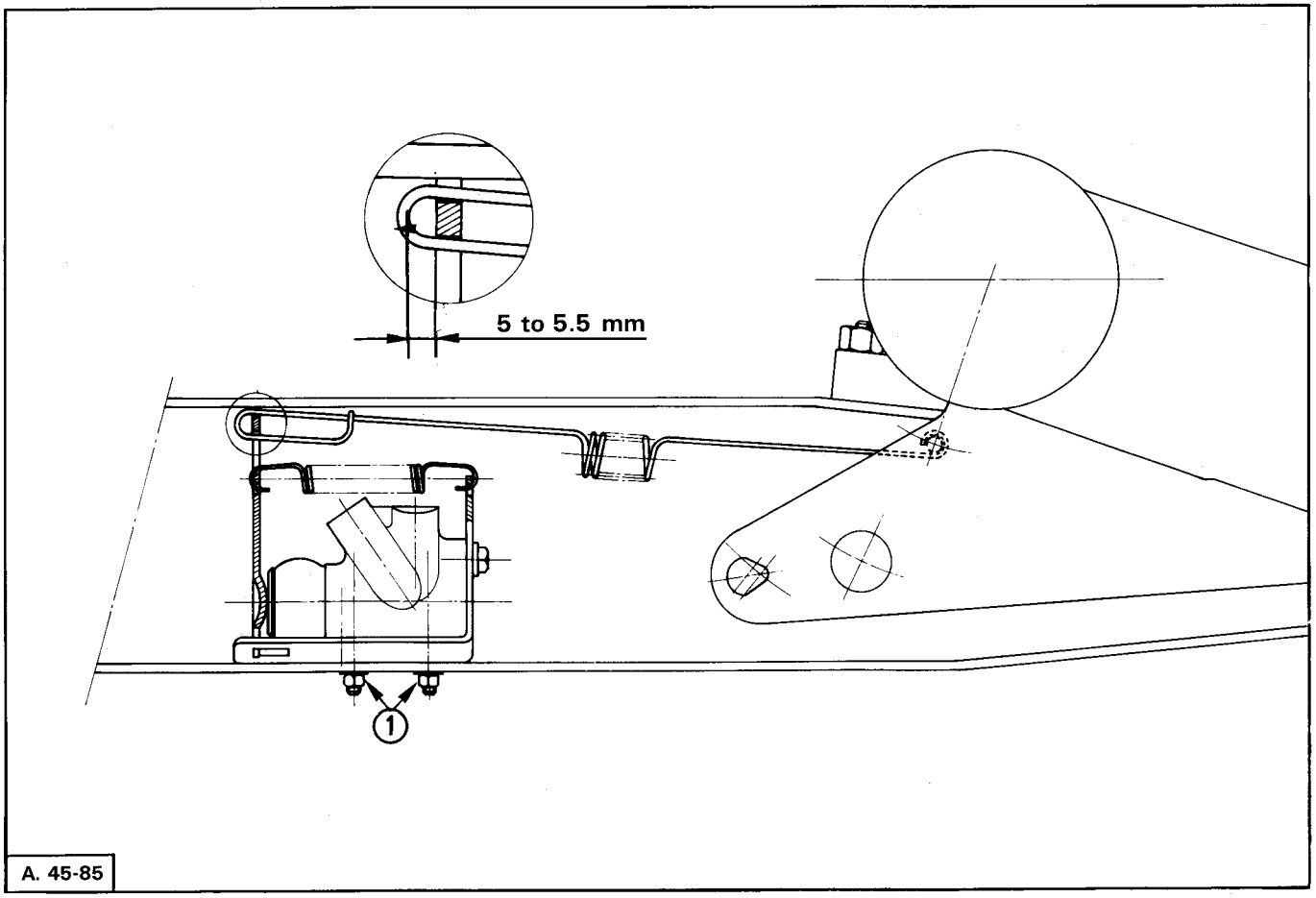
Supplement No. 1 to Manual 816-1 (CORR)

- Clearance between the feed pipe spirals and the tube : ..... g = 6 mm maxi (0.23 in)
- Outside diameter of brake pipes : ..... 3.5 mm (0.13 in)
- Inside diameter of seals : ..... 3.5 mm (0.13 in)
- Diameter of pipe unions : ..... 8 mm (0.31 in) (pitch = 1.25)

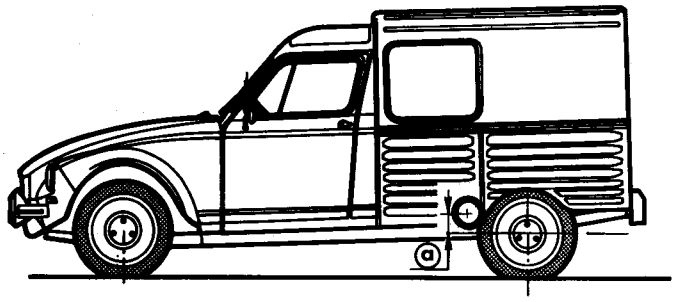
Tightening torques :

- Nuts holding the feed pipe securing clips : ..... 1 da Nm (7.22 ft.lbs)
- Bolt holding the three-way union : ..... 2 da Nm (14.44 ft.lbs)
- Brake pipe unions : ..... 0.8 to 0.9 da Nm (5.77 to 6.49 ft.lbs)

BRAKE PRESSURE LIMITER
ACADIANE Vehicle (AY series CD) *10/1979* ⟶



A. 45-85



Adjustment of the brake pressure limiter :

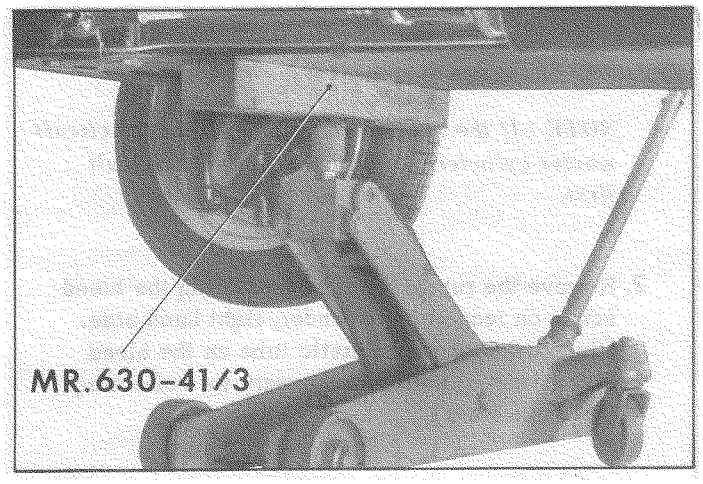
This adjustment is to be carried out after any operation modifying the vehicle heights.

Conditions of adjustment :
- vehicle unladen,
- fuel tank filled up,
- a 70 kg load in place of the driver's seat. It corresponds to a distance **a = 143.5 mm** measured between the axis of the wheels and the axis of the rear axle crossmember.

Adjustment :
Depress the brake pedal, keep it in this position to close the brake pressure limiter. Slacken the nuts (1) and move the limiter/support assembly to obtain a distance **b = 5 to 5.5 mm** between the control lever and the control spring loop.

I. ADJUSTING THE ECCENTRICS.

PL. 478



Adjusting the front brake eccentrics :

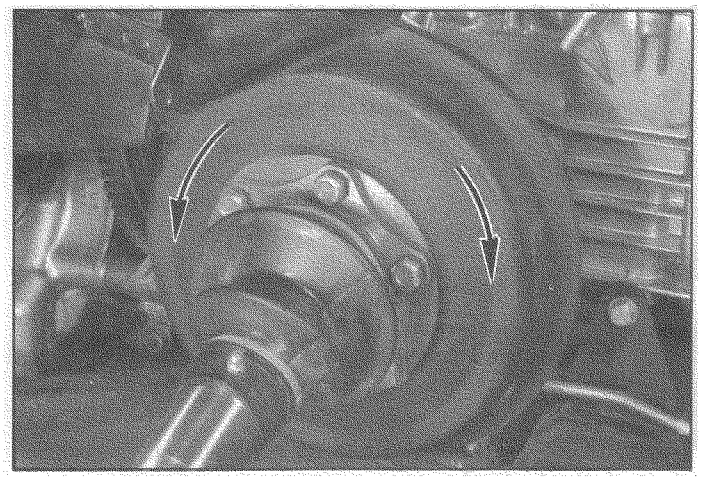
1. Lift the front part of the vehicle (using support MR. 630-41/3 on a mobile jack).

2. Turn one of the eccentrics in the direction indicated by the arrow, while rotating the drum by hand, until the brake shoe comes into contact with the drum. Turn the eccentric slightly backwards to release the drum.
   Tighten the eccentric once again until the brake shoe lining rubs slightly.
   Repeat the operation for the other brake shoe.

   NOTE : This operation should never end with a releasing motion.

   The brake shoes should be adjusted as near the drum as possible to ensure a short pedal travel.

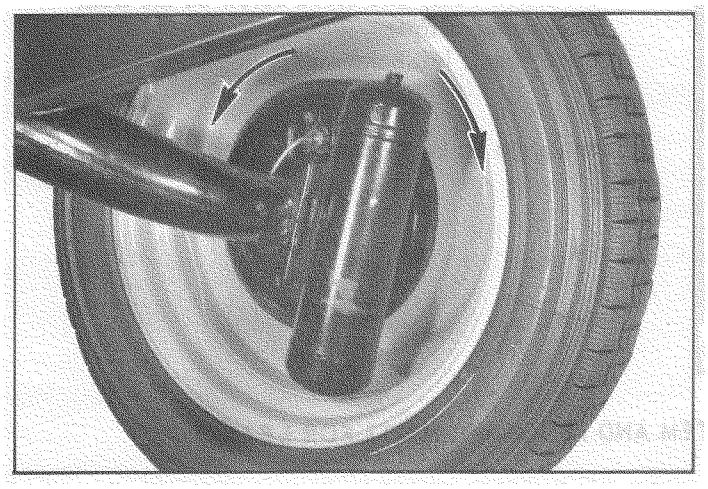
3352



3. Repeat the operation for the other wheel.

4. Lower the vehicle to the ground.

PL. 515



Adjusting the rear brake eccentrics :

5. Lift the rear part of the vehicle (using support MR. 630-41/3 on a mobile jack).

6. Proceed as in paragraph 2 above.
   Turn the eccentrics as indicated by the arrows.

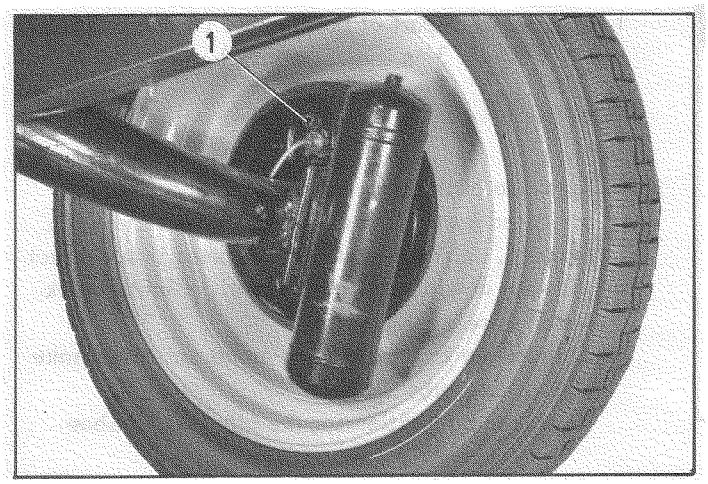
7. Repeat the operation on the other wheel.

8. Lower the vehicle to the ground.

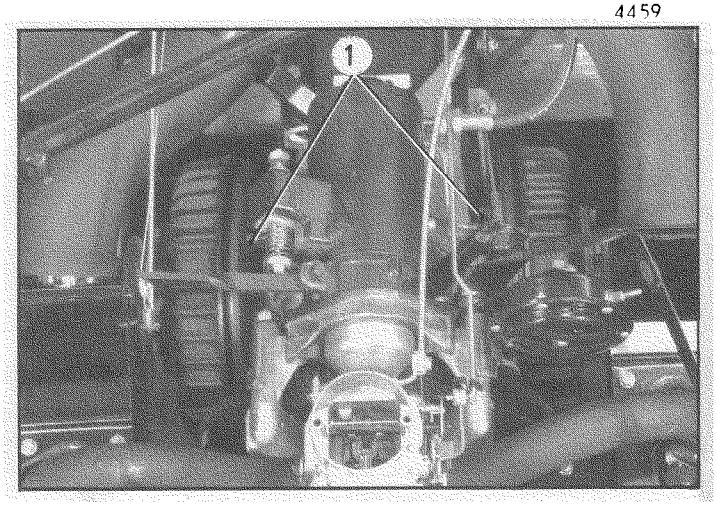
II. BLEEDING THE BRAKING SYSTEM.

Hydraulic fluids :
Vehicles fitted with drum brakes on all four wheels : Use hydraulic fluid corresponding to norm SAE J 1703 only.
Vehicles fitted with disc brakes at the front : Use green LHM fluid exclusively.

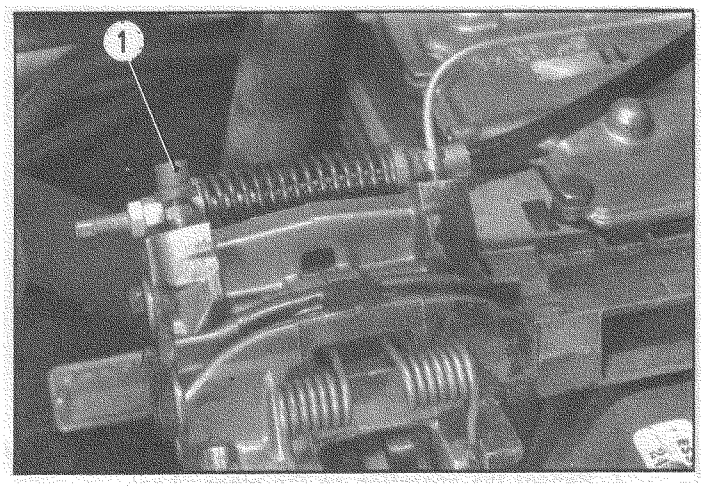
PL. 515



4459



5521



1. Top up the brake fluid reservoir (s).

NOTE : If the vehicle is fitted with a dual circuit master cylinder, bleed the front wheel circuit first.

2. Remove the rubber cap (1) protecting the bleed screw on rear wheel cylinder, right-hand side. Place a transparent plastic tube on the bleed screw (a container is necessary for collecting the brake fluid).

3. **Bleed the braking system :**

Slacken the bleed screw by approximalely half a turn. Have an assistant depress the brake pedal. When the brake pedal is fully depressed, tighten the bleed screw. Release the pedal.
Repeat the operation until air bubbles no longer appear in the transparent tube.
Check the level in the brake fluid reservoir and top up as required.
Take care to tighten the bleed screw only when the pedal is being depressed.

4. Remove the plastic tube. Replace the rubber cap on the bleed screw.

5. Repeat these operations for each wheel, in the following order :
- rear wheel, right-hand side,
- rear wheel, left-hand side,
- front wheel, right-hand side (when disc brakes are fitted : only one bleed screw on the front right-hand calliper),
- front wheel, left hand side.

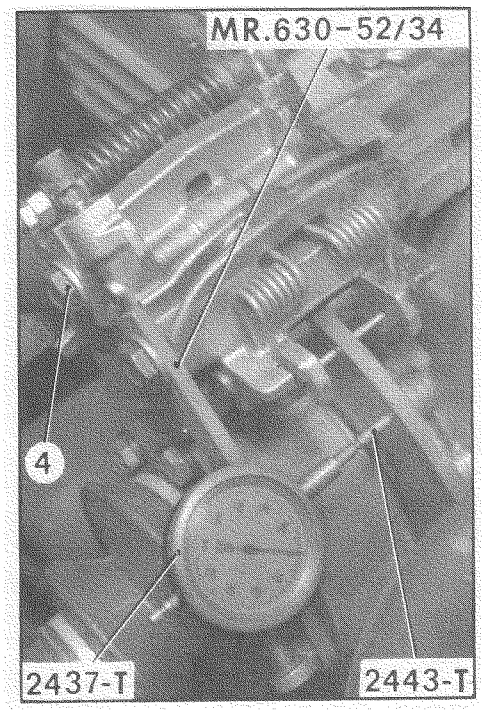
6. Top up the brake fluid reservoir.

III. CHECKING THE HYDRAULIC SYSTEM AND ITS COMPONENTS FOR LEAKS.

Depress the brake pedal as firmly as possible for 30 seconds to 1 minute.
When resistance is felt in the pedal, the sealing is good. If the pedal keeps going down more or less quickly, there is a leak.
Watch the fluid level in the reservoir at the same time. If the fluid is forced back, the cup of the master cylinder is not leak-tight and the unit must be repaired.

IV. CHECKING THE FRONT DISC LATERAL RUN-OUT.

5588



Use dial gauge 2437-T with bracket MR. 630-52/34, fitted with adaptor 2443-T.

a) Checking the lateral run-out, calliper in position :

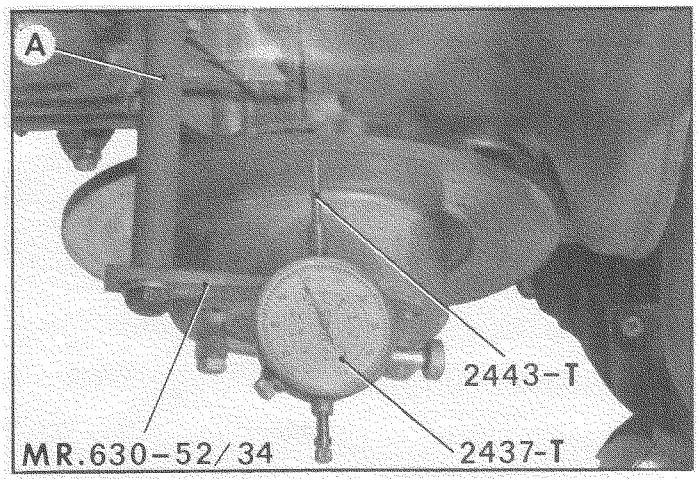
Fix the square support using the screw (4), which secures the front part of the calliper.

b) Checking the lateral run-out, calliper removed :

Fit a spacing tube (A) (length = 110 mm, 4.33 in ; interior diameter = 10 mm, 0.39 in) between the support and the gearbox to enable the positioning of the necessary instruments.

The lateral run-out thus measured should not exceed 0.2 mm (.0078 in).

5605

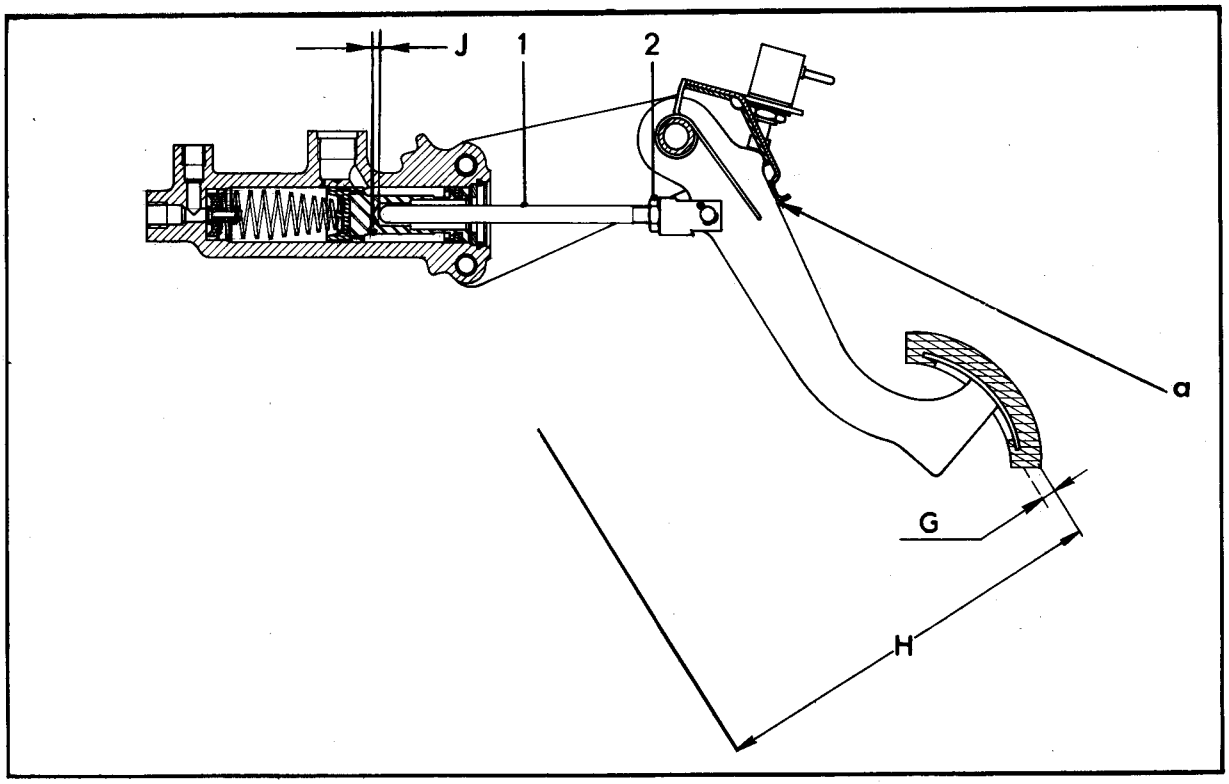


NOTE : This measurement corresponds to the sum of both disc run-out and gearbox outlet shaft run-out. In the case it exceeds 0.2 mm (.0078 in) it is necessary to test the six possible positions for disc and gearbox assembly.

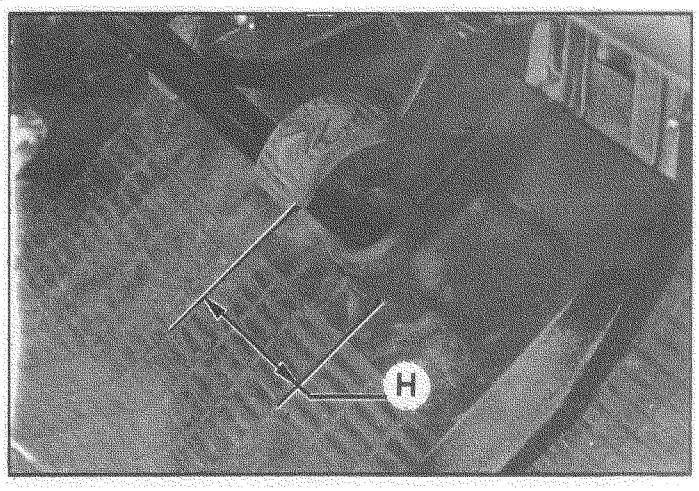
If this cannot be achieved, change either the disc or the gearbox outlet shaft and repeat the check.

I. ADJUSTING THE BRAKE PEDAL CLEARANCE.

A. 45-8 a



10 741



1. Checking the pedal height :

In order to check the height **H** of the pedal according to the type of vehicle considered, see Operation A. 450-00. This check must be carried out with the pedal on stop « a ». In the case the height **H** is not conformable, bend the support plate at « a » to obtain the desired clearance.

2. Adjusting the pedal clearance :

Slacken the lock nut (2). Turn the push rod (1) to obtain a clearance J = 0.5 to 1 mm (0.019 to 0.039 in) between the push rod and the master cylinder piston which corresponds to a pedal clearance of 5 mm (« **G** » = **5 mm, 0.19 in**).

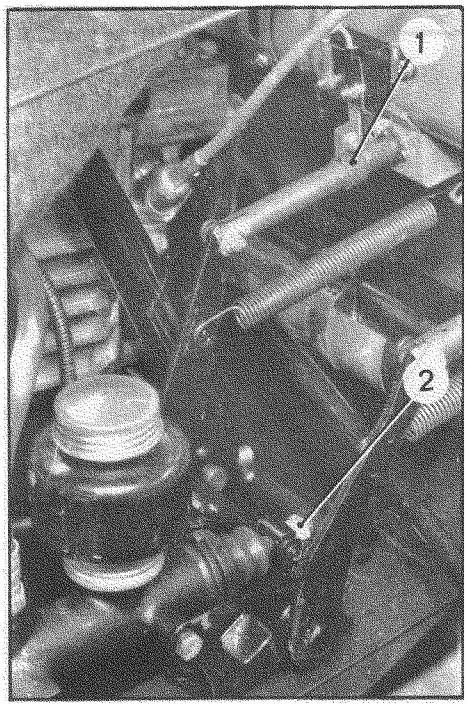
3. Adjusting the stoplamp switch :

a) Check that the brake pedal is correctly adjusted in rest position (see paragraphs 1 and 2 above).

b) Depress the brake pedal with the hand. The stoplamps should come on as soon as the pedal clearance has been taken up and the master cylinder piston has begun to move.

If necessary, bend the stoplamp support plate to obtain this condition.

481



Adjusting the pedal clearance :
(on an old pedal gear).

Slacken nut (2) locking the push rod.
Turn the rod so as to obtain **a clearance of 0.5 to 1 mm (0.012 to 0.039 in) between the push rod and the master cylinder piston.**

Adjusting the stoplamp switch :

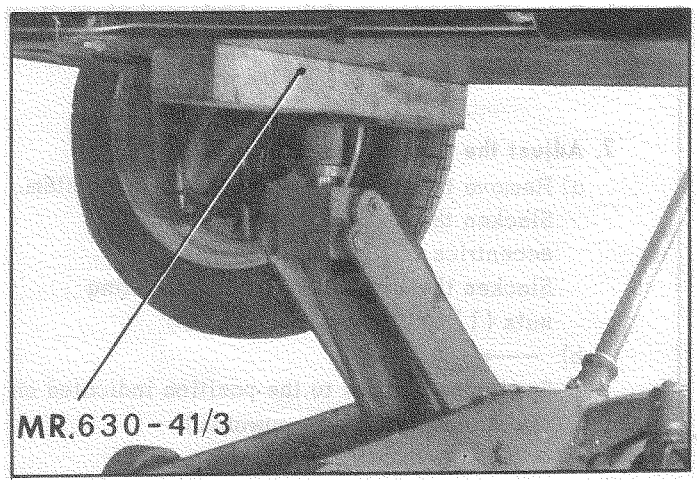
For a pedal **travel** of **1.5 mm (0.059 in)** the stoplamps should not come on.

For a pedal **travel** of **10 mm max. (0.039 in),** the stoplamps should come on.

Otherwise, move the locking collar (1) on the pedal until those conditions have been met.

ADJUSTING THE HANDBRAKE

PL. 478



NOTE : The handbrake operates the front brake drums only.

1. Raise the front part of the vehicle using support MR. 630-41/3 on a mobile jack.

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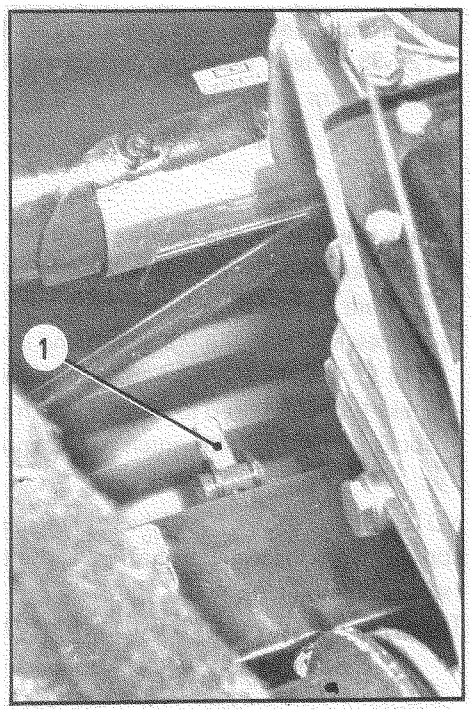
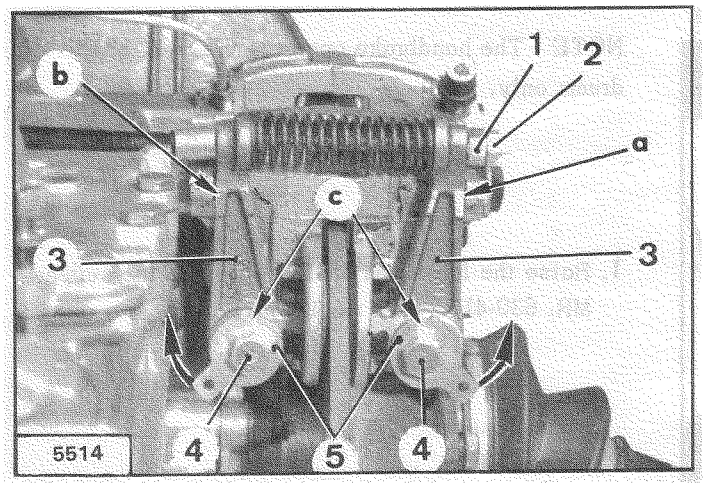
PL. 518

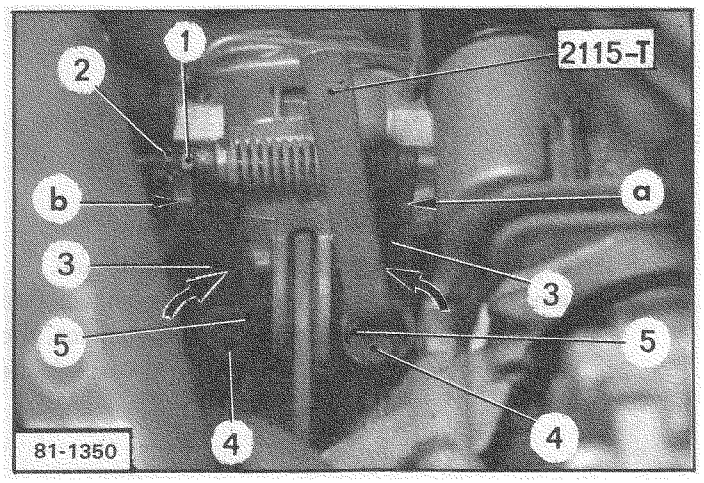


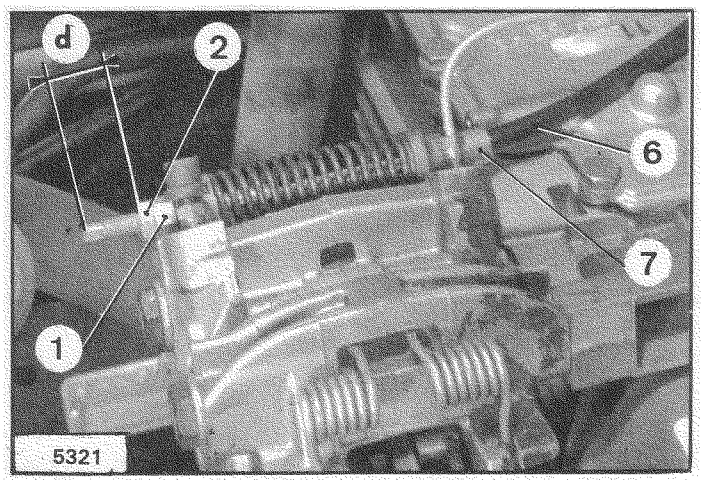
2. Adjust the tension of both brake cables in turn, using the nuts (1) so that the wheels begin to tighten when the brake handle is raised to the third notch, and when it has reached the fifth notch, the wheels are locked.

ADJUSTING THE HANDBRAKE

The handbrake controls four pads which act upon the front brake discs. It is completely independant from the main brake.







1. Raise the front part of the vehicle and place it on stands. Push the parking brake handle fully in.

2. **Adjust the eccentrics :**
   a) Remove the flexible ducts for heating system.
   Slacken the securing screws (4) of the eccentrics (5).
   Slacken the lock nuts (2) and adjusting nuts (1).
   b) ⟶ *6/71 :*
   Set the eccentrics to the position indicated on the photo (slots « c » upwards).
   6/71 ⟶ *:*
   Set the eccentrics to the position allowing maximum clearance (spanner 2115-T).
   Make sure that the arms (3) are on their stops at « a » and « b ».
   c) Turn eccentric (5) in the direction indicated by the arrow until the pads just come in touch with the disc. This adjustment must be carried out at the point of maximum run-out (turn the disc by actuating the corresponding wheel).
   d) Tighten the securing screws (4) to 4 da Nm (28.88 ft.lbs), making sure that the eccentrics do not turn while tightening.

3. **Adjust the handbrake cable :**
   a) Make sure that the sheath ends (7) and the sheaths (6) are correctly positioned.
   b) Successively turn the right-hand and left-hand nuts (1) so that the wheels begin to tighten when the brake handle is raised to the third notch and they are locked when the fifth notch has been reached.

   NOTE : The lengths « d » of the cable threads must be approximately the same on the right and left hand sides (within 5 mm (0.19 in).
   Tighten the lock nuts (2) to 1.5 daNm (10.83 ft.lbs).

4. **Check the hand brake :**
   Make sure that the handbrake does not work loose when raised to locking position.
   Operate the control lever several times, ensuring that the adjustment does not vary.

5. Lower the car to the ground.