

Alfa Romeo



MAINTENANCE MANUAL

DISC BRAKES *Ate*

- GIULIA 1300
- GIULIA 1300 ti
- GIULIA SPRINT GT
- GIULIA SPRINT GT VELOCE
- GIULIA GTC
- GIULIA TI
- GIULIA SUPER
- SPIDER 1600

SUPPLEMENT TO «INSTRUCTION BOOK»

Hydraulic brake

General

The hydraulic brake system consists of four caliper type disc brakes operated by a master cylinder. The friction pads of the front and rear brakes are directly actuated by the cylinders integral with the calipers. The brakes are self-adjusting.

Every **6000** km.
(3750 mi.)

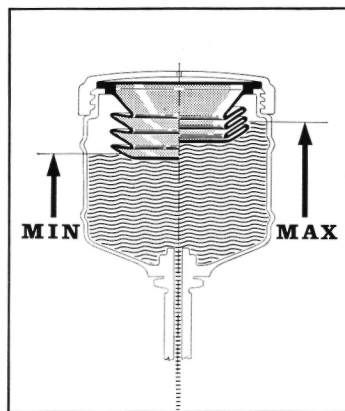
To maintain the brakes in good operating condition, follow the servicing instructions given below:

check that minimum level of fluid in the reservoir is not below the max. level by more than a quarter.

For renewal or topping up, it is absolutely essential to use only

Castrol Girling Brake Fluid Amber

from freshly opened sealed containers. After topping up and before the reservoir cover is fitted, reassemble the reservoir sealing bellows making sure it is correctly positioned between body and cover.



Every **18,000** km.
(11,250 mi.)

Renew the brake fluid at the prescribed periods. For effective and reliable operation of the brake system, the pipes must always be full of fluid and free of air bubbles.

Excessive and spongy brake pedal action is an indication of the presence of air bubbles in the system.

Compressed air must not be used for replenishing the system.

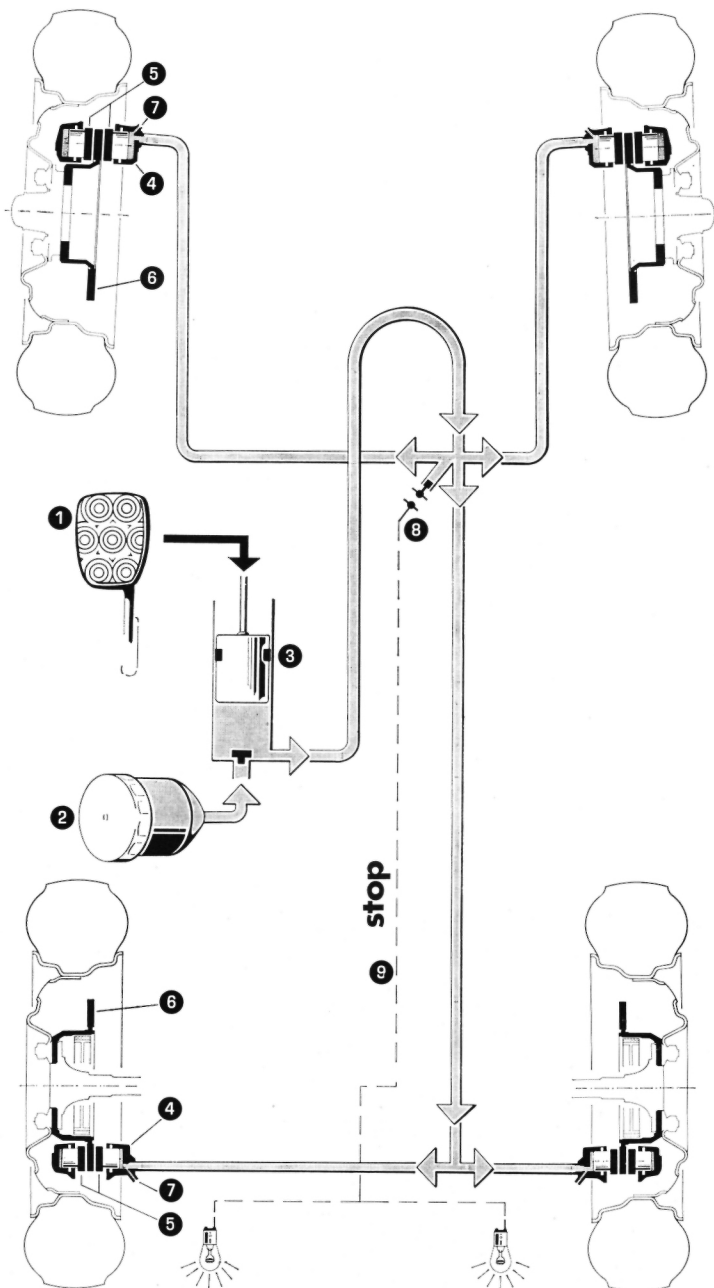
Should flushing of the brake circuit be required, use exclusively fluid of the specified type.

Compressed air or alcohol must on no account be used to dry a flushed system.

Hydraulic brake

GIULIA 1300
GIULIA 1300 ti
SPIDER 1600

Operating diagram

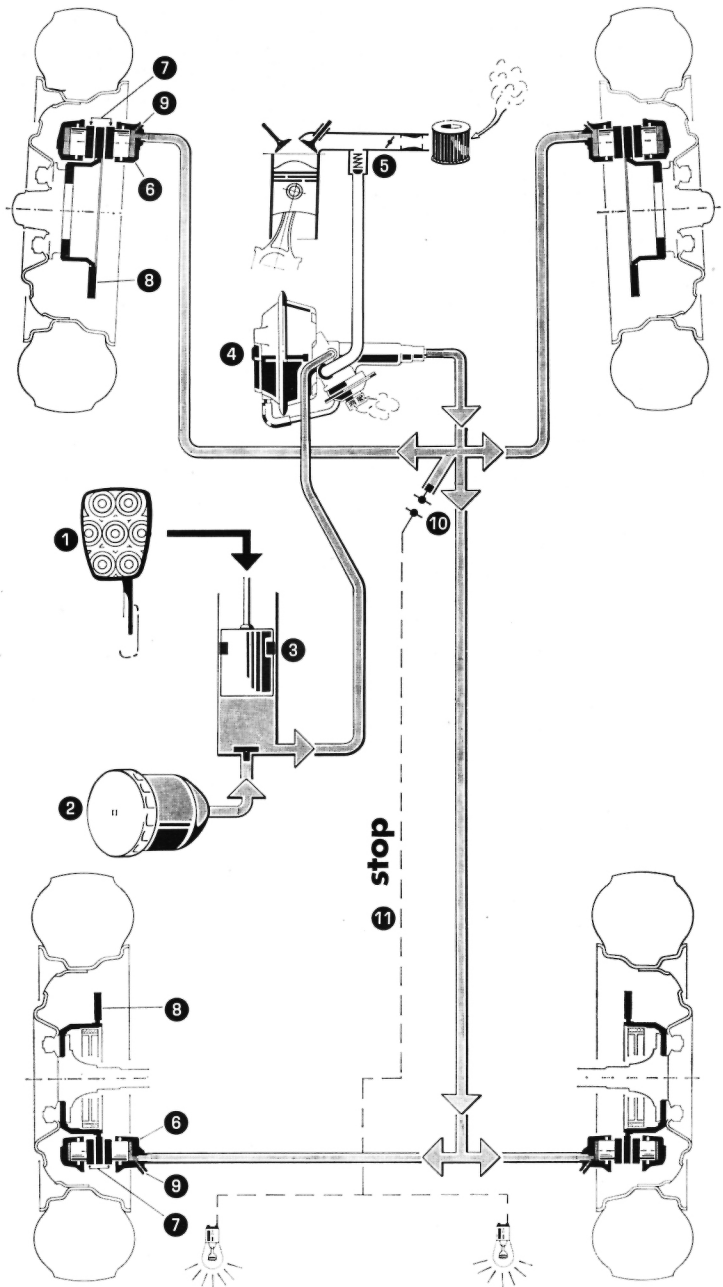


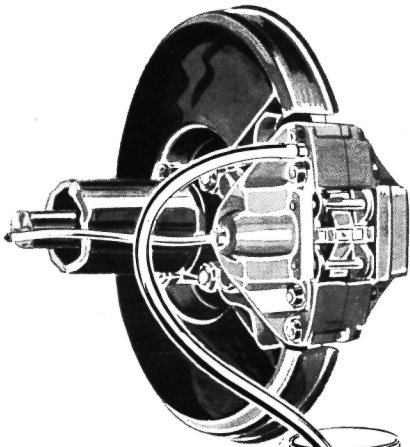
- 1 Brake pedal
- 2 Fluid reservoir
- 3 Master cylinder
- 4 Slave cylinders
- 5 Friction pads
- 6 Discs
- 7 Bleed screws
- 8 Stop light switch
- 9 Stop light cable

Hydraulic brake

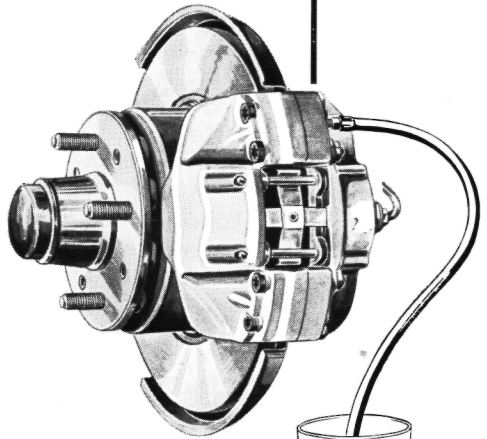
Operating diagram for servo assisted brakes

- 1 Brake pedal
- 2 Fluid reservoir
- 3 Master cylinder
- 4 Vacuum servo
- 5 Vacuum connection on intake manifold
- 6 Slave cylinders
- 7 Friction pads
- 8 Discs
- 9 Bleed screws
- 10 Stop light switch
- 11 Stop light cable





Rear



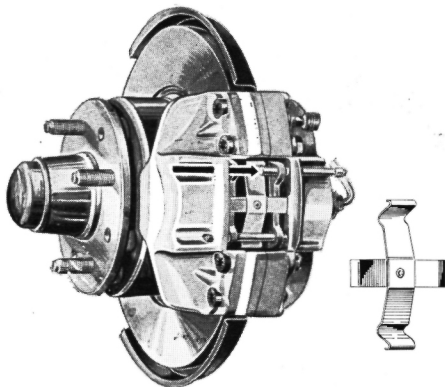
Front

Bleeding should be performed with the greatest care following these instructions:

- 1 Fill the reservoir, if necessary, with the genuine fluid freshly drawn from sealed containers; during bleeding operations pay attention that fluid level does not drop below the full by more than a quarter.
 - 2 Bleed each wheel cylinder starting from the rear ones as follows:
Push a rubber pipe over the bleed screw; the other end will lead to a glass container for collection of fluid.
Loosen the bleed screw.
Depress the brake pedal several times allowing it to return slowly until the pipe discharges fluid free from air bubbles.
Hold the pedal down and tighten the bleed screw.
- * If the bleeding has been carefully performed, it will be found that when brake pedal is depressed, direct action on the fluid can be felt, free of resilience, immediately at the end of the free travel. If not, repeat the procedure.

Removal

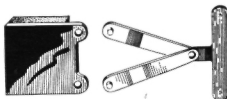
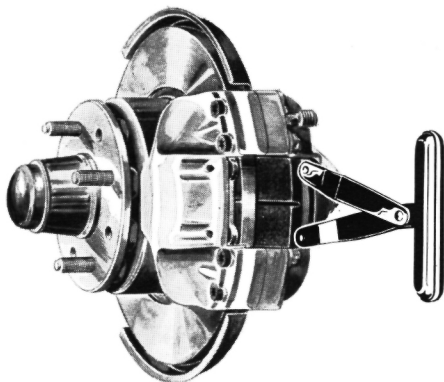
Every **6000** km. check front & rear pads for wear.



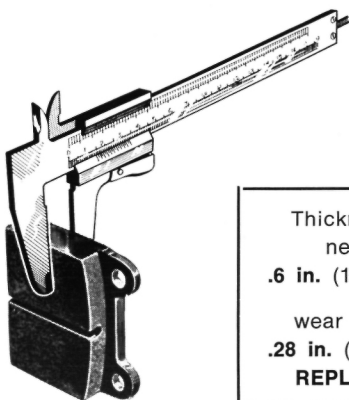
Proceed as follows:



- Jack up the car and remove the wheel;
- drive the upper retaining pin out of caliper with a punch;
- remove the cross-shaped spring;
- drive out the lower retaining pin.



- Withdraw the pads with the puller **A.2.0150**.



Thickness:
new
.6 in. (15 mm.)
wear limit
.28 in. (7 mm.)
REPLACE

- Check pad thickness.

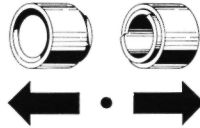
In case of uneven wear of pads, it is advisable to replace the whole set (front or rear).

Hydraulic brake

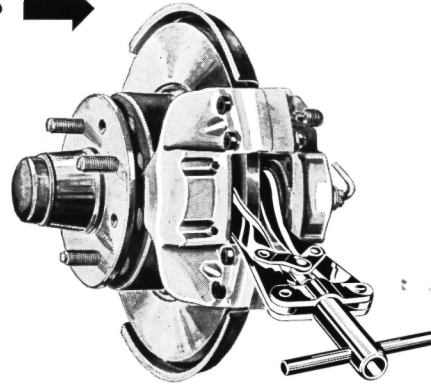
CHECKING THE FRICTION PADS

Clean the pad surface: never use mineral base solvents or sharp-edged tools; check that dust excluder and retaining ring are sound; if not, replace them.

Reassembly



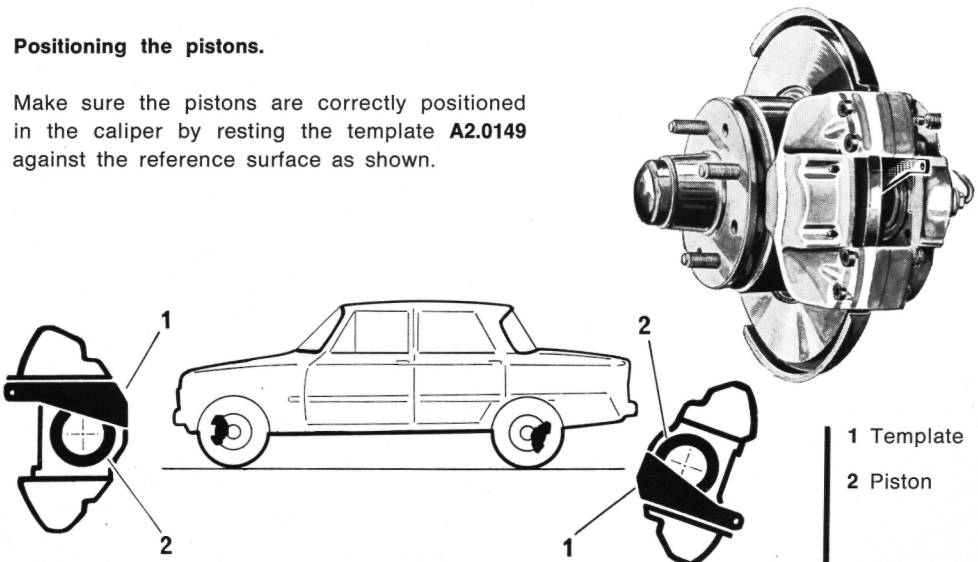
Press the pistons to the bottom of cylinders with the resetting tool **A2.0147**; do not use chance tools which could damage the pistons or the disc.



When resetting pistons care should be taken to prevent fluid overflow from the reservoir.

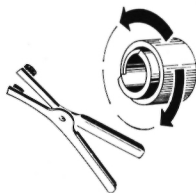
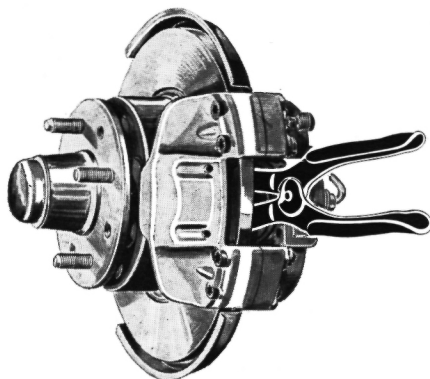
Positioning the pistons.

Make sure the pistons are correctly positioned in the caliper by resting the template **A2.0149** against the reference surface as shown.



- 1 Template
- 2 Piston

Reassembly



If the pistons are not in the correct position rotate them with the special pliers **A2.0148** as shown.

- Insert the friction pads in the caliper; if new pads are fitted, make sure they slide freely in their housing.
- Fit a retaining pin and then the cross-shaped spring; press down the free end of spring so that the other retaining pin can be fitted.
- With a suitable drift push the retaining pins fully home.

Warning

When refitting the pads, check the conditions of cross-shaped springs and upper & lower retaining pins and replace, if necessary; however, **these parts must be peremptorily replaced** whenever new pads are fitted.

To clean the outside of brake assemblies use suitable detergents mixed with hot water; then thoroughly dry all components with compressed air.

Never use gasoline, trichloroethylene or similar solvents to clean the outside of brakes as these substances are detrimental to the rubber seals.

While servicing the car, be careful not to let lubricants come in contact with the discs and friction pads.

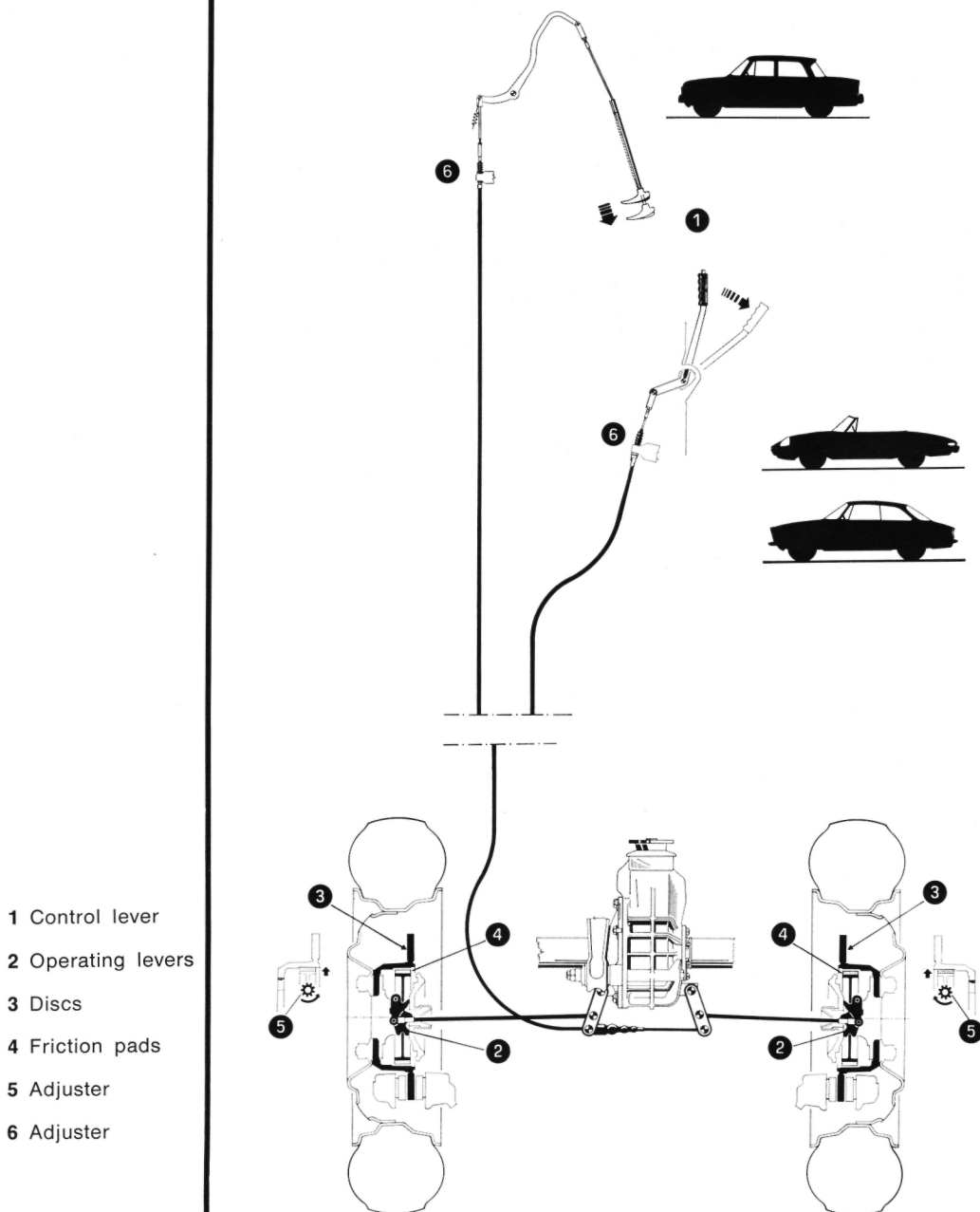
When cleaning the underside of the car, it is advisable to mask off the brakes to avoid damaging the brake components with jets of water.

In case of accident or damage to the chassis check that the brake vacuum servo is undamaged, since even slight superficial body damage may seriously impair the functioning of the brakes.

Do not coast downhill with the engine stopped; there will be no suction in the brake vacuum servo and a greater pressure will be needed with the brake pedal to obtain comparable braking effect.

WARNING
(cars with
assisted brakes)

Handbrake



Handbrake

DESCRIPTION AND ADJUSTMENT

It is mechanically-operated: the rear wheels are locked through shoes **4** acting against a drum machined in the disc casting. Pulling the lever causes the shoes, via the operating levers **2** to expand thus locking the wheels.

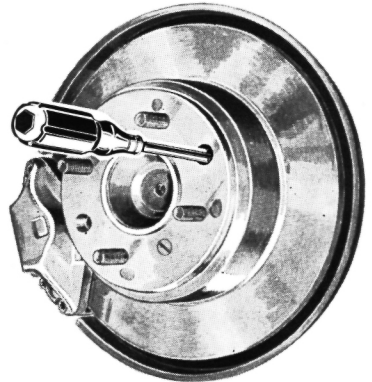
Handbrake system

A slack handbrake linkage, due to worn shoe linings, is adjusted as follows, one wheel at a time:

Handbrake linkage adjustment

- jack up the car and remove the wheel; fully release the hand brake and make sure the control cables to the calipers are slackened;
- act on the adjuster **5** one notch at a time in the direction shown in the figure until shoes just contact the drum, then back up the adjuster by two-three notches.

Gain access to the adjuster **5** with a screwdriver inserted through one of the holes in the disc casting: if hole and adjuster are not aligned rotate the disc.



The handbrake is correctly adjusted when the wheels become locked as the lever is drawn through half its total travel. If, after this adjustment, the linkage is yet slackened proceed as follows:

- rotate the adjuster **5** until shoes contact the drum and lock it;
- take up any clearance in the linkage by means of the adjuster **6**;
- back up the adjuster by two-three notches; in this condition the handbrake linkage will be correctly adjusted.

The data in this booklet are approximate only; Alfa Romeo reserves the right to change them without notice.

Alfa Romeo

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