BSA - SECTION F

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FRONT WHEEL

Front Wheel Removal
With the machine on its centre stand, place a box or small wooden trestle underneath the crankcase so that the front wheel is raised clear of the ground.
Detach the brake cable toggle (A) Fig. F1, from the operating lever on the brake cover plate and the brake plate from the right-hand fork leg.
There are two alternative brake plates fitted to the Bantam to suit the two different designs of front fork.
Whilst supporting the wheel, take off the fork end caps (B), each being held by two bolts, and withdraw

the wheel.
When replacing the wheel ensure that the spindle ends are level with the sides of the fork end caps.

Front Hub Dismantling
The Sports model has the same internal details as the other Bantams, but the hub is fitted with a full-width outer casing.

FIG. F1. Front wheel removal.
FIG. F2.
Unscrew the large nut (F) Fig. F2, from the wheel spindle. The spindle can be prevented from turning by applying the brake, using a short length of steel tubing over the operating lever.
Take off the cover plate complete with brake shoes, cam and fixed fulcrum pin, exposing the bearing retainer (G). This has a left-hand thread and is removed by unscrewing in a clockwise direction with a peg spanner (service tool No. 61-3644).
Having removed the retainer, drive out the right-hand or brake side bearing by striking the left-end on the spindle with a suitable mallet or copper hammer. If an ordinary hammer has to be used, protect the end of the spindle with a piece of hard wood. Note that a small shim is fitted between the bearing and the shoulder of the spindle.

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To remove the left-hand bearing, first prise out the circlip (H), then insert the spindle from the right-hand side and drive out the bearing with its dust cover. Sports models will have a shim fitted between the dust cover and the bearing face.
Before checking the bearings, wash thoroughly in paraffin and, if possible, blow out with a high pressure air line. Examine carefully for signs of roughness and excessive play, indicating broken balls or damaged tracks.

Fitting New Bearings
Place the larger of the two bearings squarely in position on the right-hand side of the hub and, using a piece of tubing, drive in the bearing. It is essential that the force applied is on the outer ring of the bearing,

not the inner ring. Screw in the bearing retainer in an anti-clockwise direction (left- hand thread), using a peg spanner.
Insert the wheel spindle, screwed end first with shim fitted, from the left-hand side and tap it gently home until the spindle shim rests on the inner ring of the bearing.
Apply a liberal coating of grease to the inner face of each bearing and fit the left-hand bearing over the spindle. Drive it into the housing until the dust cap will just clear the circlip groove and replace the dust cap and circlip. Do not omit to fit the shim between the dust cap and bearing (Sports models only).

Front Brake Shoes
After the brake plate has been removed from the wheel the brake shoes can be released by levering them outwards and upwards off the cam and fulcrum pin. The springs are very strong; so take care not to trap the fingers behind the shoes.
NOTE:Avoid handling serviceable brake linings with greasy hands.
FIG. F3.

REAR WHEEL
Rear Wheel Removal
With the machine firmly supported on its centre stand, disconnect the rear chain at its spring link and unwind the chain off the rear wheel sprocket on to a sheet of clean paper. It is advisable to leave the chain in position on the gearbox sprocket.
Take off the brake rod adjuster, and unscrew the torque arm bolt (C) Fig. F3. Disconnect the speedometer cable from its drive unit and pull the inner cable clear.
Unscrew the spindle nuts (A) Fig. F3, and pull the wheel out of the fork ends, at the same time freeing the brake rod from the lever swivel pin. It may be found necessary to lean the machine slightly to the left to enable the wheel to be withdrawn from the right-hand side. Take care not to lose the distance piece fitted on the right-hand side of the spindle, next to the speedometer gearbox.
If possible, avoid disturbing the setting of the chain adjusters (B) while the wheel is out of the frame, and

when replacing ensure that the adjusters are pressed firmly against the fork ends.

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Check also that the spring clip of the chain connecting link is correctly fitted and has its closed end pointing in the direction of travel (i.e., rearwards on the bottom run).
For details of chain adjustment, see page F5.

Rear Hub Dismantling
After first applying the brake to lock the spindle, unscrew the large nuts (A) Fig. F4, at each end of the spindle.
Take off the brake cover plate complete with brake shoes and then the speedometer drive gearbox, noting its distance piece and driving dogs.
FIG. F4.
It will now be possible to unscrew the bearing retainer (B) which has a normal right-hand thread, using a peg spanner.
The wheel spindle should now be driven through the brake side bearing with a soft mallet, so pushing out the right-hand bearing.
The brake side bearing and thrust washer can now be driven out from the opposite side using a drift against the outer race of the bearing.

Fitting New Bearings
New bearings must be fitted in the reverse manner but care must be taken to see that the thrust washer is fitted behind the drive-side bearing and that the bearing is seated well up to the hub shell abutment and the shoulder on the spindle.
After fitting the drive-side bearing and its retainer, insert the spindle from the right-hand side and drive in the right-hand bearing to the spindle shoulder. Fit the distance piece (C) Fig. F4, on to the spindle, then the speedometer gearbox taking care to mesh the driving dogs.
When the brake cover plate has been fitted the spindle nuts (A) can be replaced and tightened.

Rear Brake Shoes
These are dealt with in the same manner as described

for the front wheel on page F3, and are interchangeable with the front shoes.

Chainwheel
If the chainwheel teeth appear to be hooked or damaged in any way it is advisable to replace it, since excessive chain wear will occur.
The chainwheel is secured to the brake drum by eight bolts fitted with spring washers.

BRAKE ADJUSTMENTS
The brakes must be adjusted to give maximum efficiency at all times and for this to be maintained, the shoes should be just clear of the drum when the brake is off, and close enough for immediate contact when the brake is applied. The brakes must not be adjusted so closely, however, that they are in continual contact with the drum; excessive heat may be generated, resulting in deterioration of braking efficiency.

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The front brake adjuster is situated on the lower right-hand fork leg. Rotation of the screwed sleeve alters the effective length of the cable so adjusting the position of the shoes in the drum. The locknut should be tightened after each adjustment.
The rear brake is adjusted by turning the self-locking sleeve. To open the shoes in the drum the effective length of the brake rod must be shortened by turning the sleeve in a clockwise direction (viewed from the rear of the machine).
Note that if maximum efficiency is to be obtained, the angle between the brake cable or rod should not exceed 90º when the brake is fully applied.

REAR CHAIN ADJUSTMENT
The chain should be adjusted with the machine on its centre stand so that the rear wheel is at its lowest position in the rear suspension travel.
Rotate the rear wheel slowly until the tightest point of the chain is found, then check that the total up and down movement is ¾" in the centre of the chain run. If the chain tension requires adjustment first slacken off the brake adjuster sleeve, the wheel spindle nuts, and

the bolt retaining the torque arm. Tighten both chain adjuster nuts evenly until the correct chain setting is obtained but make sure that the adjusters are pressed firmly against the fork ends.
After adjustment, tighten the wheel spindle nuts and the torque arm bolt. Re-check the setting of the chain and adjust the rear brake as described opposite.
NOTE:It is strongly recommended that the wheel alignment is checked after any adjustment to the rear chain has been made; full details of this are given on page F7.

RENEWING BRAKE LININGS
Holding the brake shoe in a vice, cut off the peened-over portion of the rivet with a good sharp chisel, as shown below.
FIG. F5.
Drive out the rivets with a suitable pin punch and discard the old oil lining. Reverse the shoe in the vice and draw-file the face to remove any burrs.
Clamp the new lining tightly over the shoe and, using the shoe holes