

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

BSA - BSA_D14_instruction_manual

175 c.c. Bantam Supreme. Model D14/4

175 c.c. Bantam Sports. Model D14/4S

175 c.c. Bushman. Model D14/4B

INSTRUCTION MANUAL

175 c.c. BANTAM Supreme. Model D14/4

175 c.c. BANTAM Sports. Model D14/4S

175 c.c. BUSHMAN. Model D14/4B

B.S.A. MOTOR CYCLES LTD., ARMOURY ROAD,
BIRMINGHAM, 11 ENGLAND

Telephone: Birmingham, VICTORIA 2381

Telegrams and Cables: SELMOTO, Birmingham.

B.S.A. Motor Cycles Ltd. Reserve the right to alter the designs or any constructional details of their manufacture at any time without giving notice.

XXXX

Reproduced August 2003 by Tom Seale

Printed in England Copyright B.S.A. Co. Ltd. July, 1967

INSTRUCTION MANUAL

This Instruction manual is intended to acquaint the B.S.A. owner with details of the controls, general maintenance and technical data which may be required for normal operation of the machine.

It does not contain the information necessary to carry out complete stripping for major overhauls, but if any owner feels competent to carry out this type of work, a service manual and an illustrated spares catalogue for this machine can be obtained from his B.S.A. spares stockist or local dealer.

Owners in the British Isles can obtain these publications direct from B.S.A. Motor Cycles Ltd., Service Department, Armoury Road, Birmingham 11. Always quote full engine and frame numbers when ordering these publications.

2

The controls of the Bantam Sports. Note: Bushman models are not fitted with an ignition switch, main beam warning light, or parking light, but are otherwise similar.

Fig. 1. The Controls

The lower illustration shows the controls for the Bantam Supreme.

3

CONTENTS

AIR CLEANER	20
BRAKES	28
CARBURETTER	18
FRONT CHAIN	24
REAR CHAIN	28
CLEANING	11
CLUTCH	25
CONTROLS	7

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

CYLINDER HEAD AND BARREL REMOVAL	15
DRIVING	8
DECARBONISING	15
ELECTRICAL EQUIPMENT	30 and 32
FORKS	28
GEARBOX	26
HUBS	26
IGNITION TIMING	13
LUBRICATION CHART	22, 23
LUBRICATION (ENGINE)	12 and 22
ROUTINE MAINTENANCE	11
REAR SUSPENSION	29
RUNNING-IN	10
SPARKING PLUG	17
STEERING HEAD	29
TECHNICAL DATA	5 and 6
TRANSMISSION	24
WHEEL REMOVAL (FRONT)	27
WHEEL REMOVAL (REAR)	27
WIRING DIAGRAM	34, 35

4 pages

TECHNICAL DATA

Engine Number on top of crankcase below cylinder.

Frame Number at top of steering head tube.

Engine:

Capacity 173 c.c.

Cylinder bore 61.5 mm.

Stroke 58 mm.

Compression ratio 10/1

Piston ring gap minimum .009 in.
maximum .013 in.

Spark plug N4

Plug points gap minimum .020 in.
maximum .025 in.

Contact breaker points gap012 in.

Ignition timing (fixed) 18 degrees (before T.D.C.)

Transmission:

Gear ratios top 6.58 (Supreme, Sports), 8.1 (Bushman)

third 8.55 (Supreme, Sports), 10.5 (Bushman)

second 12.04 (Supreme, Sports), 14.8 (Bushman)

first 18.68 (Supreme, Sports), 23.0 (Bushman)

Clutch friction plates 4

Chain size and pitch

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

front x .250 in. 50 pitches
rear $\frac{1}{2}$ x .335 in. roller 120 pitches (Supreme, Sports), 128 pitches (Bushman)
Teeth on: engine sprocket 17
gearbox sprocket 16
clutch sprocket. 38
rear chainwheel 47 (Supreme, Sports), 58 (Bushman)

Capacities:

Fuel tank 1 gallons
Petrol mixture See pages 12 and 22
Gearbox 1 pint
Front forks pint (Supreme), 16 pint (Sports and Bushman) each leg

5

TECHNICAL DATA

Wheels:

Tyre size front 3.0018 (Supreme, Sports), 3.00-19 (Bushman)
rear 3.0018 (Supreme, Sports), 3.00-19 (Bushman)
Tyre pressure front 16 p.s.i.
rear 22 p.s.i.
Brake size dia. $5\frac{1}{2}$ in.
wide 1 in.

Carburation: Amal

Bore 26 mm.
Main jet 150
Pilot jet 25
Throttle valve 32
Needle position 105
Needle jet

General Details:

Overall length $77\frac{1}{2}$ in. (Supreme, Sports), 78 in. (Bushman)
Wheelbase 50 in.
Ground clearance (at crankcase) .. $6\frac{3}{4}$ in. (Supreme, Sports), 10 in. (Bushman)
Seat height 31 in. (Supreme), $30\frac{1}{4}$ in. (Sports), $30\frac{1}{2}$ in. (Bushman)
Overall height $36\frac{1}{2}$ in. (Supreme, Sports), $40\frac{1}{2}$ in. (Bushman)
Handlebar width $27\frac{3}{4}$ in. (Supreme), 23 in. (Sports), $27\frac{3}{4}$ in. (Bushman)

The recommended tyre pressures are based on a rider's weight of 154 lbs. If the rider is heavier, increase the pressures as follows:

Front tyre: Add one lb. Per sq. in. for every 28 lb. Increase above 154 lb.

Rear tyre: Add one lb. Per sq. in. for every 14 lb. Increase above 154 lb.

If additional load is carried in the form of a pillion passenger or luggage, the actual load bearing upon each tyre should be determined and the pressures increased in accordance with the Dunlop Load and Pressure Schedule

TAKING OVER THE MACHINE

Before running the machine make sure that the fuel tank contains the correct mixture of oil and petrol, that the gearbox is properly topped up with oil and that the battery is filled and charged. (See appropriate chapters for filling instructions). Normally these preparations will be carried out by the dealer who is selling the machine and the new owner has only to arrange the controls to his liking and the machine is ready for the road.

The Controls

The new rider should make sure that he is quite familiar with all the controls before attempting to ride the machine. Most of the controls are adjustable and should be positioned so that they can be reached without moving the hands from the grips or the feet from the footrests. Handlebars should be adjusted so that a comfortable and natural riding position is achieved. Make sure that the bolts retaining the handlebar clamps are tight after completing any adjustment. Badly positioned controls cause poor control of the machine and will bring discomfort on long journeys.

Handlebar Controls

Twist Grip. Mounted on the right handlebar it controls the throttle opening and consequently the engine speed. To open the throttle (i.e. to increase the engine speed) turn the grip so that the top moves towards the rider. Excess slackness in the cable can be removed by means of an adjuster incorporated in the cable at the carburetter end.

The rotary stiffness of the twist grip can be varied by means of the adjuster screw and locknut. It is set for average requirements when leaving the factory, but can be readjusted to suit individual preference.

Front Brake. Lever mounted on the right handlebar in front of the throttle control. Grip the lever gently to operate the brake.

Clutch. The lever is mounted on the left handlebar. Grip the lever to free the clutch, i.e. to disengage the drive between the engine and the rear wheel.

Horn. The horn button is mounted on the left handlebar and is incorporated in the headlight dipper switch.

Headlight Dipper Switch. Controls the switching from main to dipped headlight beams and is mounted on the left handlebar.

Cut-out Button. On Bushman models, an ignition cut-out is provided on the left handlebar and is mounted on the same body as the horn button and headlight dipper switch.

Headlight Warning Light. On Supreme models for U.S.A. only, a red warning light on the headlight body indicates when the main beam is in use. On Sports models the warning light is a standard item.

Other Hand Controls

Carburetter Air Control. Situated on the right handlebar, adjoining the front brake lever. When closed (moved away from the rider) a rich mixture is provided for starting purposes. For normal running, the lever should be turned clockwise as far as possible. Cable adjustment is at the carburetter.

Petrol Tap. Under the rear end of the tank. To turn on the petrol, pull out the serrated button and lock in position by turning anti-clockwise. To turn off the petrol, reverse this procedure.

Headlight Switch. This is operated by a switch on the headlamp, and has three positions OFF, LOW (L), and HEAD (H) respectively. The low position is for use when the machine is stationary and applies only to Supreme and Sports.

Ignition Switch. (Supreme and Sports models) This is mounted on the top of the headlamp and has three positions. With the pointer straight ahead, the ignition is switched off, and the switch should always be retained in this position when the

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

engine is stationary, otherwise after several hours (say, over-night) the battery may become discharged. For normal starting, rotate the switch until the position marked I is straight ahead. For emergency starting with a discharged battery, rotate the switch until position E is straight ahead. (ImportantSee Electrical Equipment).

Carburetter Tickler. This is a small plunger above the float chamber. Pressing it down pushes down the float and frees the needle valve thus permitting the carburetter to receive excess petrol.

Steering Lock. Provision is made for locking the steering. Turn the forks to the left, when the hole in a special frame lug will coincide with the corresponding hole in the bottom yoke lug. Locking