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## ENGINE

## PISTON

Material . . . . .	"Lo-ex" aluminium	
Compression ratio . . . . .	10 : 1	
Clearance (bottom of skirt) . . . . .	0·0038—0·0039"	(0·096—0·099 mm.)
Clearance (top of skirt) . . . . .	0·0077—0·0078"	(0·195—0·198 mm.)
<i>(both measured on major axis)</i>		

## PISTON RINGS

Material . . . . .	Cast-Iron	
Width . . . . .	0·097—0·102"	(2·463—2·590 mm.)
Depth . . . . .	0·0615—0·0625"	(1·562—1·587 mm.)
Clearance in groove . . . . .	0·0025"	(0·0635 mm.)
Fitted gap (maximum) . . . . .	·013"	(·3302 mm.)
Fitted gap (minimum) . . . . .	·009"	(·2286 mm.)

## CYLINDER BARREL

Material . . . . .	Close-grained cylinder iron	
Bore size (standard) . . . . .	61·5 mm.	
Stroke . . . . .	58 mm.	
Oversizes . . . . .	·020" & ·040"	(·508 mm. & 1·016 mm.)
Inlet port size . . . . .	1"	(25·4 mm.)
Exhaust port size . . . . .	1¼"	(32 mm.)

## IGNITION TIMING (Fixed)

Crankshaft (before top dead centre) . . . . .	16·5°	
Piston (before top dead centre) . . . . .	0·060"	(1·524 mm.)

## CARBURETTER (Concentric)

Type . . . . .	Amal R626/12	
Main jet . . . . .	160	
Pilot jet . . . . .	25	
Needle jet size . . . . .	·105"	(2·667 mm.)
Needle position . . . . .	3	
Throttle valve . . . . .	3	
Nominal choke size . . . . .	26 mm.	
Throttle slide return spring (free length) . . . . .	3-1/16"	(78 mm.)

**BEARING DIMENSIONS**

Crankshaft bearing (left- and right-hand)	..	..	..	..	..	·75 × 1·875 × ·5625" (19·05 × 47·625 × 14·2875 mm.)
Crankshaft bearing outer (right-hand)	..	..	..	..	..	17 × 40 × 12 mm.
Layshaft bush, left- and right-hand (bore)	..	..	..	..	..	·6105—·6115" (15·507—15·532 mm.)
Gearbox sleeve pinion bearing	..	..	..	..	..	·875 × 1·875 × ·375" (22·225 × 47·625 × 9·525 mm.)
Mainshaft final drive gear bush (bore)	..	..	..	..	..	·4965—·4975" (12·611—12·636 mm.)
Mainshaft diameter (gear-side)	..	..	..	..	..	·6247—·6250" (15·867—15·944 mm.)
Mainshaft diameter (drive-side)	..	..	..	..	..	·498—·499" (12·649—12·675 mm.)
Layshaft diameter (left- and right-hand)	..	..	..	..	..	·6095—·6100" (15·481—15·608 mm.)
Gearbox mainshaft bearing	..	..	..	..	..	·625 × 1·5625 × ·4735" (15·875 × 39·6875 × 11·1125 mm.)
Big-end roller (18)	..	..	..	..	..	4 × 8 mm.
Small-end bearing	..	..	..	..	..	·5625 × ·75 × ·625" (14·2875 × 19·05 × 15·875 mm.)
Gudgeon pin diameter	..	..	..	..	..	·5617—·5620" (14·267—14·275 mm.)

**TRANSMISSION****CLUTCH**

Type	..	..	..	..	..	Multi-plate
Number of plates	..	..	..	..	..	7
Driving (bonded segments)	..	..	..	..	..	4
Driven (plain)	..	..	..	..	..	3
Overall thickness of driving plates and segments	..	..	..	..	..	1/8" (3 mm.)
Clutch springs	..	..	..	..	..	6
Free length of springs	..	..	..	..	..	1·9/64" (29 mm.)
Clutch push rod, short (length)	..	..	..	..	..	1·998—2·002" (50·75—50·85 mm.)
Clutch push rod, short (diameter)	..	..	..	..	..	·186—·188" (4·7244—4·7752 mm.)
Clutch push rod, long (length)	..	..	..	..	..	5·778—5·782" (146·76—146·86 mm.)
Clutch push rod, long (diameter)	..	..	..	..	..	·180—·182" (4·57—4·62 mm.)

**SPROCKETS**

Engine	..	..	..	..	..	17 teeth
Clutch	..	..	..	..	..	38 teeth
Gearbox	..	..	..	..	..	16 teeth
Rear wheel	..	..	..	..	..	47 teeth

**CHAIN SIZE**

.. .. .. .. .. 0·500 × 0·205 × 120 links

**GEAR RATIOS**

Gearbox—(top) .. .. .	1·0	:1
—(third) .. .. .	1·301	:1
—(second) .. .. .	1·831	:1
—(first) .. .. .	2·843	:1
Overall —(top) .. .. .	6·57	:1
—(third) .. .. .	8·55	:1
—(second) .. .. .	12·03	:1
—(first) .. .. .	18·68	:1

**FRAME AND FITTINGS****FRONT FORKS**

Type .. .. .	Coil spring, hydraulically-damped
Springs:	
(free length) .. .. .	17¼" (43.8 cm.)
(spring rate) .. .. .	35 lb./in.
(number of coils) .. .. .	82
Shaft diameter (top) .. .. .	1·045—1·046" (26·543—26·568 mm.)
Shaft diameter (base) .. .. .	1·000—1·001" (25·4—25·425 mm.)
Sliding tube bore .. .. .	1·125—1·129" (28·575—28·677 mm.)
Upper bush (outer diameter) .. .. .	1·121—1·122" (28·473—28·499 mm.)
Upper bush (bore) .. .. .	1·058—1·059" (26·873—26·899 mm.)
Working clearance .. .. .	0·013" (0·330 mm.)
Lower bush (outer diameter) .. .. .	1·118—1·119" (28·397—28·425 mm.)
Lower bush (bore) .. .. .	1·000—1·001" (25·4—25·425 mm.)
Working clearance .. .. .	0·006—0·011" (0·152—0·279 mm.)
Length (upper and lower) .. .. .	1" (25·4 mm.)

**REAR DAMPERS**

Type .. .. .	Coil spring, hydraulically-damped
Springs:	
(fitted length) .. .. .	5·7" (144·78 mm.)
(spring rate) .. .. .	100 lb./in.
(colour identification) .. .. .	Yellow/tan

**SWINGING ARM**

Bush material .. .. .	Phosphor-bronze
Bush (outside diameter) .. .. .	·993—·994" (25·22—25·24 mm.)
Bush (bore) .. .. .	·860—·865" (21·84—21·97 mm.)
Housing diameter .. .. .	·990—·991" (25·14—25·17 mm.)
Interference fit on spindle .. .. .	·0085—·014" (·215—·355 mm.)
Spindle diameter .. .. .	·8735—·8740" (22·187—22·200 mm.)

## WHEELS, BRAKES AND TYRES

### WHEELS

Rim size and type (front and rear) .. .. .	WM1-18	
Spoke sizes:		
(front, left-hand) .. .. .	12 s.w.g. × 8-1/16"	(2·641 × 204·78 mm.)
(front, right-hand, inner) .. .. .	12 s.w.g. × 6½"	(2·641 × 165·1 mm.)
(front, right-hand, outer) .. .. .	12 s.w.g. × 6-9/16"	(2·641 × 166·69 mm.)
(rear, right-hand) .. .. .	10 s.w.g. × 7-5/16"	(3·251 × 201·612 mm.)
(rear, left-hand, inner) .. .. .	10 s.w.g. × 6½"	(3·251 × 165·1 mm.)
(rear, left-hand, outer) .. .. .	10 s.w.g. × 6½"	(3·251 × 165·1 mm.)

### WHEEL BEARINGS

Front:		
(left-hand) .. .. .	15 × 35 × 11 mm.	
(right-hand) .. .. .	17 × 40 × 12 mm.	
Spindle diameter (at ground portions):		
(right-hand) .. .. .	·6687—·6692"	(16·985—16·998 mm.)
(left-hand) .. .. .	·5899—·5904"	(14·9835—14·9962 mm.)
Rear:		
(left- and right-hand) .. .. .	17 × 40 × 12 mm.	
Spindle diameter (at ground portions): .. .. .	·6687—·6692"	(16·985—16·998 mm.)

### BRAKES

Front and rear (diameter) .. .. .	5½"	(139·7 mm.)
Front and rear (width) .. .. .	1"	(25·4 mm.)
Lining thickness .. .. .	5/32"	(·4 mm.)
Total lining area (front and rear) .. .. .	20 sq. in.	(129 sq. cm.)

### TYRES

Size (front and rear) .. .. .	3·00 × 18"	
Pressure (front) .. .. .	17 p.s.i.	(1·2 atm)
Pressure (rear) .. .. .	22 p.s.i.	(1·5 atm)
<i>(see also page F12)</i>		

### ELECTRICAL EQUIPMENT (6 volt)

Battery .. .. .	Lucas 6 volt PUZ5E/11
Alternator type .. .. .	Wipac 1G1768
Contact breaker unit .. .. .	Wipac S0584
Ignition coil .. .. .	Wipac S0769
Rectifier .. .. .	Wipac S2642
Bulbs:	
(headlight, main) .. .. .	30/24 watt pre-focus
(headlight, pilot) .. .. .	3 watt M.E.S.
(stop/tail light) .. .. .	6/18 watt S.B.C. staggered pin
(speedometer light) .. .. .	0·6 watt B.A. 7S lug cap
Horn .. .. .	Clearhooter HF900

**CAPACITIES**

Petrol proportion . . . . .	..	..	..	..	See page A3	
Fuel tank . . . . .	..	..	..	..	1.875 gallons or 2.25 U.S. gallons	(8.5 litre)
Gearbox . . . . .	..	..	..	..	$\frac{3}{4}$ -pint	(0.5 litre)
Front fork (each leg) . . . . .	..	..	..	..	$\frac{1}{8}$ -pint	(0.07 litre)

**BASIC DIMENSIONS**

Wheelbase . . . . .	..	..	..	..	50.0"	(127 cm.)
Overall length . . . . .	..	..	..	..	77.5"	(196.85 cm.)
Handlebar width . . . . .	..	..	..	..	27.75"	(70.49 cm.)
Seat height (unladen) . . . . .	..	..	..	..	31"	(78.74 cm.)
Overall height (approximate) . . . . .	..	..	..	..	40.0"	(101.6 cm.)
Ground clearance . . . . .	..	..	..	..	6.75"	(17.15 cm.)

**WEIGHTS**

Machine (unladen) . . . . .	..	..	..	..	215 lbs.	(97.5 kg.)
Engine/gearbox unit (less carburetter) . . . . .	..	..	..	..	51 lbs.	(23 kg.)

### D14 BANTAM SPORTS MODELS

All general data is the same as that given in preceding pages  
for the Supreme models except for the following:—

#### CARBURETTER

.. .. . Concentric R626/13

#### FRONT FORKS

Shaft diameter	..	..	..	..	..	1·248—1·249"	(31·70—31·72 mm.)
Sliding tube bore	..	..	..	..	..	1·475—1·477"	(37·46—37·51 mm.)

#### BUSHES

Upper bush (outside diameter)	..	..	..	..	..	1·4750—1·4755"	(37·465—37·477 mm.)
Upper bush (bore)	..	..	..	..	..	1·250—1·251"	(31·750—31·775 mm.)
Working clearance	..	..	..	..	..	0·001—0·003"	(0·025—0·076 mm.)
Length	..	..	..	..	..	2½" overall	(28·5 mm.)
Lower bush (outside diameter)	..	..	..	..	..	1·473—1·474"	(37·44—37·41 mm.)
Lower bush (bore)	..	..	..	..	..	1·2485—1·2495"	(31·714—31·737 mm.)
Working clearance	..	..	..	..	..	0·001—0·004"	(0·025—0·102 mm.)
Length	..	..	..	..	..	1¼" overall	(31·75 mm.)

#### WHEELS

Spoke sizes:							
(front, left-hand)	..	..	..	..	..	12 s.w.g. × 6-21/32"	(2·641 × 169·069 mm.)
(rear, right-hand)	..	..	..	..	..	10 s.w.g. × 6-9/16"	(3·251 × 166·687 mm.)

#### BASIC DIMENSIONS

Seat height (unladen)	..	..	..	..	..	30·5"	(77·47 cm.)
Handlebar width	..	..	..	..	..	23"	(58·42 cm.)
Overall height (approximate)	..	..	..	..	..	37·5"	(95·25 cm.)

#### WEIGHT

Weight	..	..	..	..	..	221 lbs.	(100·24 kg.)
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#### CAPACITY

Front forks (each leg)	..	..	..	..	..	½ pint	(0·175 litre)
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**D14 BUSHMAN MODELS**

All general data is the same as that given in preceding pages for the Supreme models except for the following:—

**BEARING DIMENSIONS**

Forks .. .. . As Bantam Sports models

**CARBURETTERS (Concentric)**

Type .. .. . Amal R626/12

**TRANSMISSION**  
**(Standard D14 Bushman models)**

**GEAR RATIOS**

.. .. . As Bantam Supreme models

**CHAIN SIZES**

Transmission .. .. .  $\cdot 500 \times 0\cdot 205'' \times 120$  links

**TRANSMISSION**  
**(D14 Bushman Pastoral models)**

**GEAR RATIOS**

Gearbox .. .. . As Bantam Supreme models  
Overall—(top) .. .. . 8·10 :1  
—(third) .. .. . 10·54 :1  
—(second) .. .. . 14·83 :1  
—(first) .. .. . 23·03 :1

**SPROCKETS**

Rear wheel .. .. . 58 teeth

**CHAIN SIZES**

Transmission .. .. .  $\cdot 500 \times 0\cdot 205'' \times 126$  links

**WHEELS, BRAKES AND TYRES****WHEELS**

Rim size and type (front) .. .. .	WM1-19	
Rim size and type (rear) .. .. .	WM2-19	
Spoke size:		
(front, left-hand) .. .. .	12 s.w.g. $\times 8\frac{7}{8}''$	(2·641 $\times$ 225·42 mm.)
(front, right-hand, inner) .. .. .	12 s.w.g. $\times 7\text{-}1/16''$	(2·641 $\times$ 179·38 mm.)
(front, right-hand, outer) .. .. .	12 s.w.g. $\times 7''$	(2·641 $\times$ 177·8 mm.)
(rear, left-hand) .. .. .	10 s.w.g. $\times 6\text{-}29/32''$	(3·251 $\times$ 175·42 mm.)
(rear, right-hand) .. .. .	10 s.w.g. $\times 8\frac{3}{4}''$	(3·251 $\times$ 222·25 mm.)

**TYRES**

Size (front and rear)	..	..	..	3·00 × 19"	
Pressure (front)	..	..	..	17 p.s.i.	(1·2 atm)
Pressure (rear)	..	..	..	22 p.s.i.	(1·5 atm)

**ELECTRICAL EQUIPMENT (Direct Lighting)**

Alternator type	..	..	..	Wipac 1G1791	
Contact breaker unit	..	..	..	Wipac S0584	
Ignition coil	..	..	..	Lucas 3E.T.	
Bulbs (headlight, main)	..	..	..	24/24 watt pre-focus	

*(The battery, rectifier, headlight pilot bulb  
and horn are not fitted to these models)*

**BASIC DIMENSIONS**

Overall length	..	..	..	78"	(198 cm.)
Handlebar width	..	..	..	28·5"	(72 cm.)
Seat height (unladen)	..	..	..	30·5"	(77·5 cm.)
Ground clearance	..	..	..	10"	(25 cm.)
Overall height (approximate)	..	..	..	40·5"	(103 cm.)

**WEIGHT**

Machine (unladen)	..	..	..	222 lbs.	(100·5 kg.)
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