



650 cm³ Lightning



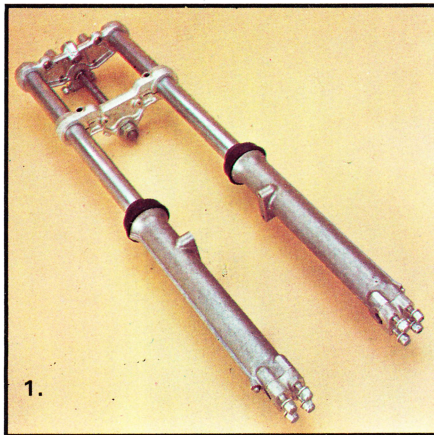
The Lightning offers twin carburetter performance from one of the world's most successful vertical twin cylinder engines. Now the new machine incorporates the new immensely rigid main frame (tested repeatedly against its predecessor it proved many times stronger) new brakes and new lightweight front forks for improved handling.

The result is a sporting motor cycle which offers performance to match its exciting good looks.

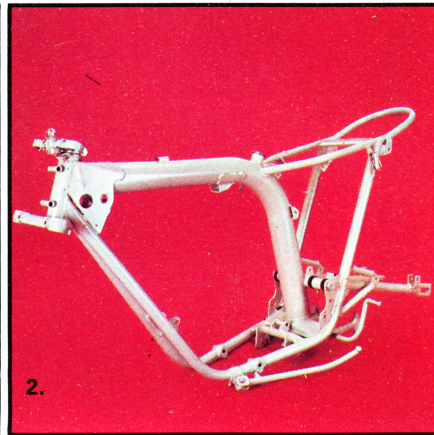
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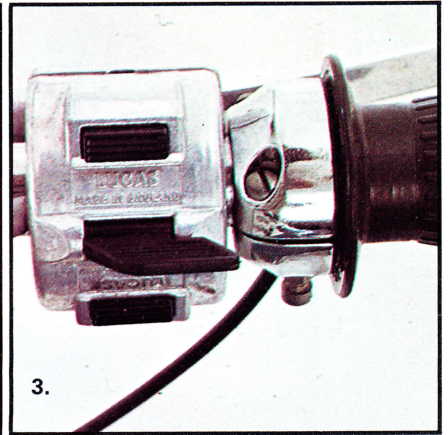
New 650 cm³ Lightning



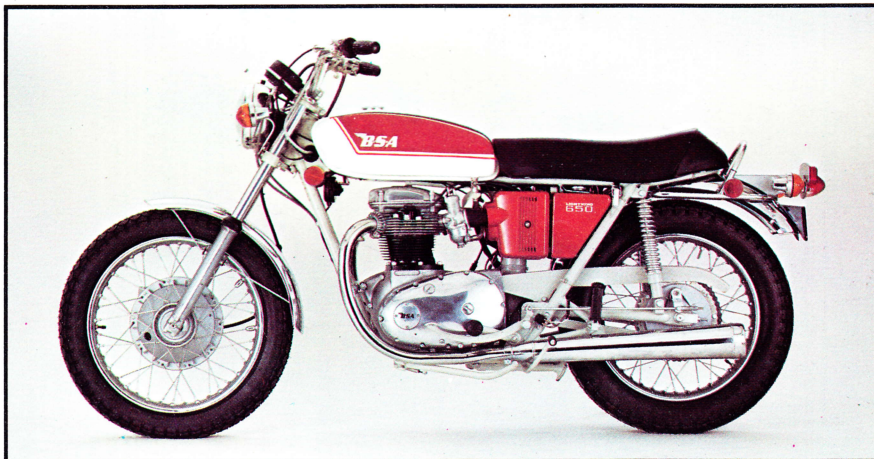
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SPECIFICATIONS

ENGINE:

Twin OHV, light alloy cylinder head. Pushrod valve operation. Twin carburetters. Twin, easily adjustable contact breakers. Gear type oil pump.

FORKS:

Two-way damped, with aluminium sliders to minimise unsprung weight.

REAR SUSPENSION:

Swinging fork, hydraulically damped and adjustable for load.

GEARBOX:

Four speed. Multiplate clutch with bonded segments and built-in transmission shock absorber.

BRAKES:

Conical light alloy hubs. Front 8" twin leading shoe drum brake. Balanced shoe application and individual snail cam shoe adjustment. Rear brake 7" single leading shoe with fully floating cam.

ELECTRICAL AND LIGHTING EQUIPMENT:

12 volt. One coil per cylinder. Crankshaft-mounted alternator. New master electrical switch and handlebar switch consoles. Direction indicators.

FRAME:

New all welded Duplex cradle frame with large diameter oil-containing main tube. Tapered roller steering head bearings.

PETROL TANK:

All steel welded, with quick release filler cap.

DUAL SEAT ASSEMBLY:

Hinged seat providing ready access to battery and other electrical equipment.

HANDLEBARS AND FITTINGS:

Chromium plated with smooth action twist grip. Heavy duty brake cables with built-in adjusters. Clutch and front brake lever brackets have built-in fixing points and switch consoles.

NEW FEATURES

1. New front fork design with two-way hydraulic damping, gives smooth controlled ride whatever the road conditions.
2. New frame is immensely strong and rigid because of the large diameter main tube. This carries the engine oil too, thus effecting a significant weight saving and a reduction in temperature through the vast surface area. A frame plotted by computer and proved by testers over the most punishing test surfaces available.
3. New, compact switch arrangement with horn button, dip switch, direction indicator switches, headlamp flasher and ignition cut-out button in two compact consoles.

PLUS THESE EXTRA FEATURES:

- Fade-free brakes. Front 8" with twin leading shoes. Rear 7" brake with single leading shoe and fully floating cam.
- New conical hubs, front and rear, made from light alloy. Design adds strength, dissipates heat faster.
- New megaphone type silencer.
- Flashing direction indicators front and rear.
- Instruments and headlamp cushioned in new anti-shock mounting.

TECHNICAL DATA

Engine Type	OHV	Primary Chain Size	$\frac{3}{8}$ " Triplex
No. of Cylinders	2	Rear Chain Size	$\frac{5}{8}$ " x $\frac{3}{4}$ "
Bore/Stroke mm.	75 x 74	Tyre Size Front	3.25 x 19
Bore/Stroke ins.	2.95 x 2.91		K70
Capacity cm ³	654	Tyre Size Rear	4.00 x 18
Capacity cu. ins.	39.91		K70
Comp. Ratio	9:1	Front Brake dia/type ins/cm	8" 2LS 20
Eng. Spr. Teeth	28	Rear Brake dia/type ins/cm	7" 1LS 18
Clutch Spr. Teeth	58	Finish	Bronze
G/Box Spr. Teeth	20	Seat Height ins/cm	32"/81
Rear Spr. Teeth	47	Wheel base/ins/cm	56"/142
RPM @ 10 MPH (top gear)	649	Length ins/cm	87 1/2"/222
Gear ratio 4th	4.87	Width ins/cm	33"/84
" " 3rd	5.57	Ground Clearance ins/cm	7 1/2"/19
" " 2nd	7.79	Dry Weight lbs/kilos	393/178
" " 1st	12.23	Petrol-Imp gallons/litres	2 1/2/11.33
Carburetter Make	Amal (2)	Oil-Imp pints/litres	5/2.8
" Type	R930/L930		