Rec for 1956.

The new Berini

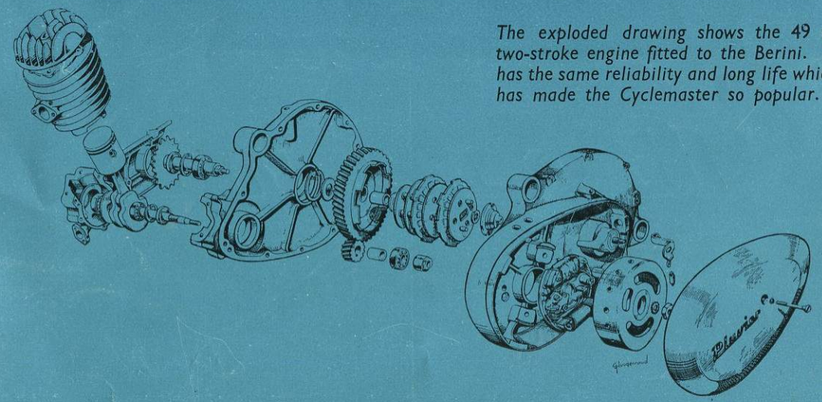
LIGHT AUTO CYCLE

(49 c.c.)

CYCLEMASTER LTD., TUDOR WORKS, BYFLEET, WEYBRIDGE, SURREY

£67 14 1 (*including P.T.*)

A Cyclemaster Product



The exploded drawing shows the 49 cc two-stroke engine fitted to the Berini. It has the same reliability and long life which has made the Cyclemaster so popular.

Description

The 49 cc engine unit of the Berini is in most respects a larger edition of the famous Cyclemaster engine. The inlet cycle being controlled by a rotary valve gives much cleaner carburation particularly at slow speeds so there is less tendency to four-stroke than would be the case with an engine of the more usual three-port layout. It also provides a better output of power, particularly at low speeds, and thus gives excellent hill climbing performance and avoids the need for a two speed gear box.

Another characteristic of this engine is the "over-square engine—the diameter of the piston being greater than the length of stroke. This feature has been introduced in a number of modern engines and results in reduction of piston speed giving longer life; and provides a smoother engine.

Primary drive is through silent helical gears. The crankshaft gear is steel and the larger clutchshaft gear is made of a special plastic material which reduces noise, and is extremely durable. Incorporated in this gear is a multiplate cork lined smooth clutch running in oil.

The special chassis frame construction incorporates the fuel tank in the frame, and provides a tank of exceptional strength and durability with large capacity (1¼ gallons).

Stability and good road holding are provided by using slightly smaller wheels, balloon tyres (white walled), and a telescopic front fork of latest design which allows a good range of movement, and is not affected by the application of the front wheel brake. Due to the special construction of the mudguard support bracket it has been possible also to ensure complete lateral stability.

The rear cycle stand is substantially constructed to enable the rider to sit on the machine and start the engine with rear wheel off the ground if required.

The materials used are of the finest quality and the manufacturing methods used are of the most advanced type based upon the experience gained by the design and manufacture of hundreds of thousands of Cycle engine units such as Cyclemaster, Berini M.13 and other Pluvier engines.

WHY GEARBOXES?

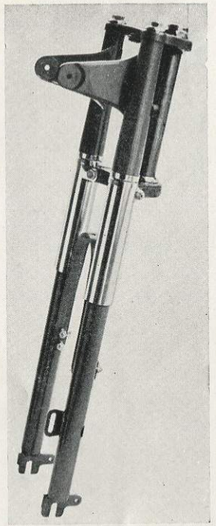
"For the pass-stormer and the rider who lives or travels in territory abounding in gradients of 1 in 10 or more the gearbox is very much worth while, but most of us are not faced with such desires and elevations. A gearbox must weigh something; must cost something; and will almost certainly make a certain amount of mechanical noise. It will also in course of time wear out parts that require replacement. There is absolutely no point at all in buying one and carrying it around, listening to it and paying for its maintenance unless one needs to."

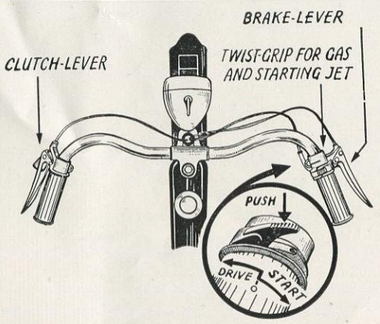
"Even more important in my view is the fact that the single-speeder, other things equal, is so much pleasanter to ride. The absence of mechanical fuss, the simplicity of control and the lightness of the machine are the things that make for pleasure as well as use in motor assisted cycling."

Comment by Clip-on in Power and Pedal, Oct., 1955.

The telescopic front fork suspension ensures, even on bad roads, excellent road-holding, which is helped by the low centre of gravity.

One lever on left-hand side of handlebar enables you to de-clutch the engine, and a normal bicycle is yours, with or without the engine ticking over; a twist grip throttle control on right-hand side of handlebar with automatic choke regulates the "cold starting" and speeds from 2½ to 38 m.p.h.





Technical Data

ENGINE	Two-stroke with reverse scavenger (flat-top piston); rotary inlet valve; crankshaft mounted in 3 bearings.
DIMENSIONS	Bore 40 mm; stroke 38 mm; capacity 49 cc.
POWER	1.8 h.p. at approx. 4,500 r.p.m.
IGNITION	Bosch Flywheel magneto with lighting coil incorporated. Capacity 8 Watt.
PISTON	Aluminium.
EXHAUST	Chromium plated, of specially noiseless design.
COMPRESSION RATIO	6.8 to 1.
TRANSMISSION	Primary: 4.45 to 1. Transmission through helical geared sprockets manufactured from a specially "noiseless" material. Secondary: 3.3 to 1. Chain.
CLUTCH	Double cork plates.
CARBURETTOR	With automatic choke incorporated in twist grip control.
FUEL MIXTURE	1 in 25.
FUEL CONSUMPTION	Approx. 1 gallon per 200 miles.
CLIMBING CAPACITY	1 in 10, with pedalling 1 in 6.
BICYCLE	"Tank frame" tubular heavy gauge steel with a tank capacity of approx. 1¼ gallons plus reserve.
RIMS	24 x 1⅜ x 1¾ in. chromium plated.
TYRES	25 x 2 in. balloon, white walled.
BRAKES	Front wheel, internal expanding drum; rear, reinforced back-pedalling hub.
SUSPENSION	Telescopic front fork.
COLOUR	Metalic Green.
LIGHTING	Headlamp chromium plated with dim and head light 6 Watt 6 Volt. Rear light 2 Watt 6 Volt.
LUGGAGE CARRIER	With spring loaded stand.
SPEED	Up to 38 m.p.h.

Extracts from *Power and Pedal* Road Test Report

"The Berini has a tremendous performance, is lovely to look at and a real delight to ride. We have met nothing better yet."

"It has that indefinable but unmistakable quality of having been designed by riders for riders and the quality of material and workmanship is first class."

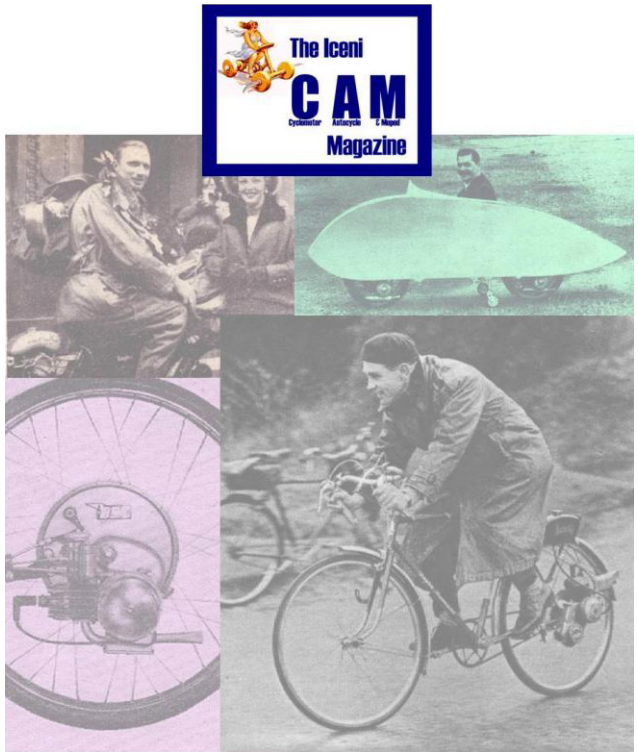
"We have had completely to revise our ideas about power curves on two-strokes in the light of experience with this unit."

"Two-inch tyres and spring forks combine to give luxury standards of comfort with safety and confidence in handling that we have never known bettered on any type of vehicle."

"For the man who wants to have cyclemotoring just as good as it can be bought—this machine is a great buy."

Printed by The Leagrave Press Ltd., Luton and London

IceniCAM
On-Line Library



www.icenicam.org.uk