

1963 Matchless Models

Introduced



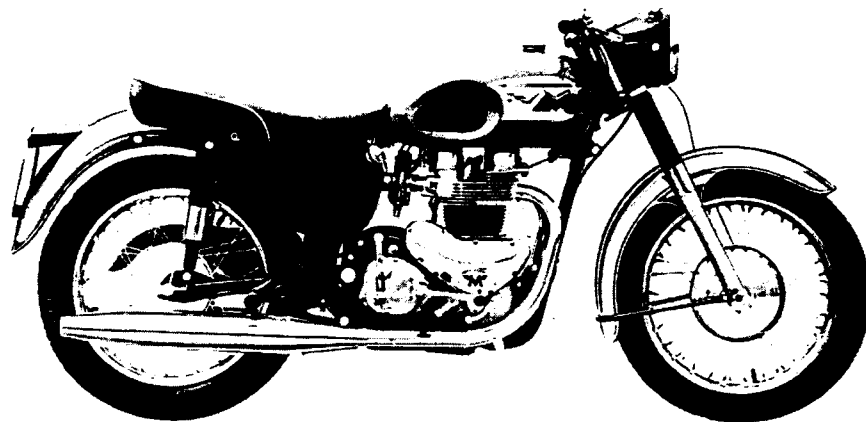
During the recent visit to the United States of Matchless Motorcycles Limited Managing Directors, J. B. Smith and A. A. Sugar, arrangements were completed for the sole distribution of Matchless Motorcycles in the United States by the J. B. Matchless Corporation of Hasbrouck Heights, N. J. They visited the West Coast with Mr. Joe Berliner, President of Berliner Motor Corporation, U. S. Norton distributors — who is also president of the newly formed J. B. Matchless Corporation.

We are pleased to include photos and specifications of the 1963 Matchless models.

1963 U.S.A. SPECIFICATIONS 500 CC. MODEL G80CS.

ENGINE

497cc. o.h.v. single (Bore 86 m.m. x 85.5 m.m. stroke). Die-cast light alloy cylinder head with cast-in valve seats: chrome plated, stellite tipped valves: duplex hairpin valve springs: built-up rockers housed in detachable alloy rocker box: hiduminium pushrods with screwed-in hardened steel end-cups: mushroom type cam followers: separate gear driven cam-wheels with single cams on each: built-up steel crankshaft assembly (each one being individually balanced) supported by two ball journal, roller and plain main bearings: two-piece crankpin — hardened steel sleeve on 85-ton alloy steel centre pin: caged triple row roller big-end bearing: forged steel connecting rod with pressed-in hardened liner: forged alloy piston with three



Matchless G-15 750 c.c. Twin.

rings: light alloy cylinder barrel with low friction iron liner: large diameter double-ended rotary reciprocating plunger pump driven by timing side of crankshaft: ignition by manually controlled waterproof competition magneto: carburetion by 1 $\frac{3}{16}$ " Amal Monobloc: 1 $\frac{3}{4}$ " diameter exhaust pipe with upswept silencer: compression ratio 8:7:1.

TRANSMISSION

Four speed Matchless gearbox driven through multi-plate clutch which incorporates a rubber vane type shock absorber: positive gear shift by foot operated pedal: light alloy gearbox shell; heavy duty primary chain runs in cast light alloy oil-bath: Gearbox is separate unit from engine and is mounted with engine into frame by means of steel plates.

FRAME

Twin tube duplex cradle: single top tube and seat tube: two large diameter looped tubes, brazed together by cross struts and braced, comprise rear sub-frame assembly: complete assembly is brazed and bolted, utilising malleable lugs: A large robust lug at the base of the seat tube houses self lubricating pivot bush for rear swinging fork.

REAR SUSPENSION

Large braced malleable lug into which two heavy duty tubes are brazed form a very rigid fork assembly. Movement controlled by Girling adjustable units.

FORKS

Heavy duty 'Teledraulic' forks designed for high speed cross country use: two way progressive oil damping: multi-rate springs: large diameter heat treated steel tubular stanchions: light alloy sliders: rubber gaiters:

LIGHTING

6 volt, 60 watt, crankshaft mounted alternator supplying current to an 11 amp/hour battery via a rectifier: quickly detachable seven inch headlamp with double filament 30w. and 24w. head bulb and single 3w. filament pilot bulb: combined rear and stop light.

FENDERS

Chrome plated steel: heavy duty tubular steel stays.

WHEELS

19" diameter steel rims (chrome plated) fitted with 3.25" Trials Universal front and 4.00" knobby rear Dunlop tires: heavy duty spokes.

BRAKES & HUBS

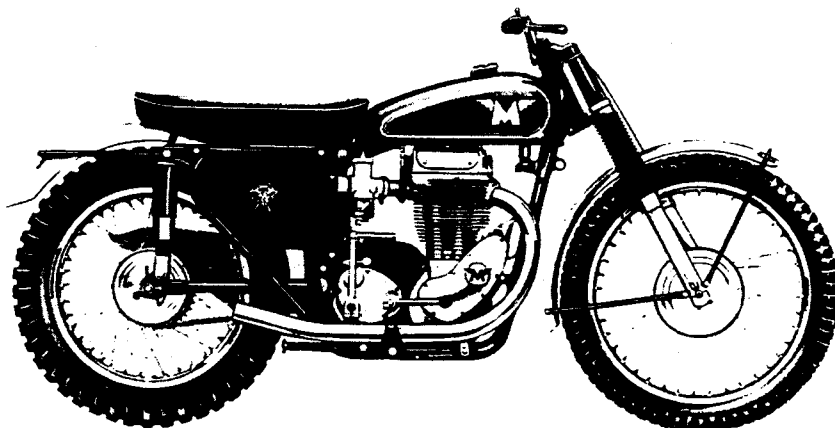
New slim light alloy front hub with cast-in 7" diameter brake drum: wider shoes mounted on webbed light alloy brake plate: two ball journal bearings support hub on high tensile steel spindle. Light alloy rear hub mounted on taper roller bearings: one piece brake drum and rear sprocket bolted up to hub.

TWINSEAT

Single level competition seat: pressed steel base: foam rubber padding: waterproof Vynide cover.

GAS TANK

Two gallon pressed steel, completely rubber mounted: mounting at front is by expanding rubber bushes, at rear by rubber bands — tank rests on foam rubber pads.



Matchless G-80 CS 500 c.c. Single.

REAR SUSPENSION

A large braced malleable lug into which two heavy tubes are brazed, form a very rigid fork assembly. Movement is controlled by Girling adjustable units.

FORKS

All models utilise heavy duty "Teledraulic" forks, but damping characteristics and spring poundages differ on all three to suit the purpose for which the model is intended. "Teledraulic" forks have two way progressive damping, multi-rate springs, heat treated tubular steel stanchions and light alloy sliders.

LIGHTING

6 volt, 60 watt, crankshaft mounted alternator, supplying current to an 11 a.h. battery via a rectifier: 7" diameter headlamp (quickly detachable on G12CS and G12CSR) with double filament head bulb and single pilot bulb: combined rear and stoplight with integral reflector.

FENDERS

Chrome plated steel blades. Those on G15 of deeper section than of those on 650cc. models: heavy duty tubular steel stays.

WHEELS

Chrome plated steel rims: Dunlop tires: sizes:—G12CS Front 3.50" x 19" Trials Universal: Rear 4.00" x 19" Knobbly. G12CSR. Front 3.25" x 19" Ribbed: Rear 4.00" x 18" Road studded. G15. Front 3.25" x 19" Ribbed: Rear 4.00" x 18" Road studded.

TRANSMISSION

Four speed Matchless gearbox driven

BRAKES AND HUBS

Light alloy front hub with cast-in 7" diameter brake drum. Shoes mounted on webbed light alloy brake plate. Light alloy rear hub — one piece brake drum and rear sprocket bolted up.

On G12CS and G12CSR, hubs mounted on taper roller bearings: on G15 mounted on ball journals.

TWINSEAT

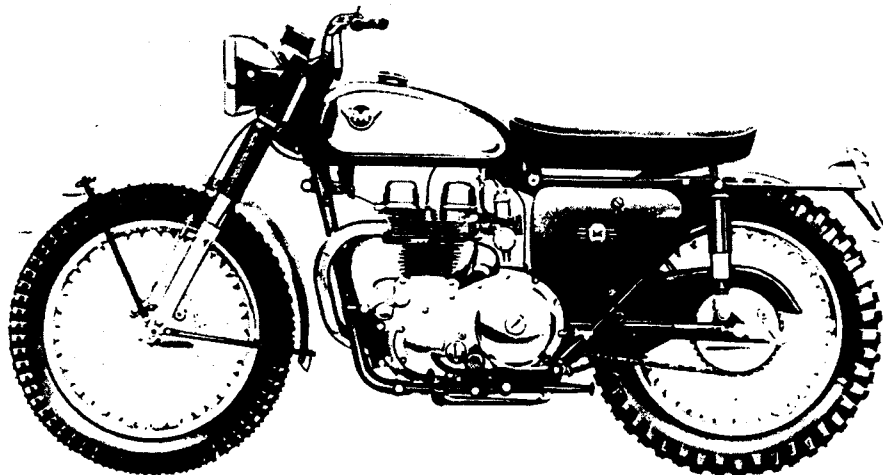
G12CS and G12CSR. Single level competition seat.

G15. Two level seat with lower riding position and slimmer pillion position. In both cases the base is pressed steel, padding foam rubber, and Vynide waterproof covering.

GAS TANK

G12CS. Two gallon pressed steel com-

(Continued next page)



Matchless G-12 CS 650 c.c. Twin.

OIL TANK

4½ pint pressed steel container bolted up to rear sub-frame.

DIMENSIONS

Seat height 32½": wheelbase 55¼": ground clearance 6½".

EQUIPMENT (fitted as standard)

Forged and brazed centre stand and prop-stand. Redesigned and now more efficient air cleaner. Full lighting equipment including stoplight. Muffler and rear number plate. Toolkit and instruction book.

COLOR FINISH

Primarily black, with tartan red petrol tank. Usual parts are chrome plated and most of the light alloy is highly polished.

The following equipment can be supplied as optional extras: Standard road tires, alternative engine sprockets, 4 gallon gas tank, pillion footrests, steering damper.

TWIN CYLINDER MODELS G12CS, G12CSR, G15

The specifications of these machines are similar in many respects, but variations do occur according to the purpose for which the individual machines are built. These variations are included in the details below:

ENGINES

Unique features of these engines are the completely separate cylinder barrels and heads, the three-bearing crankshaft, and the two oil pumps.

G12CS and G12CSR. 646cc. o.h.v. vertical twin.

(Bore 72 m.m. x 79.3 m.m. stroke)

G15. 739 cc. (45 cu. in.) o.h.v. vertical twin.

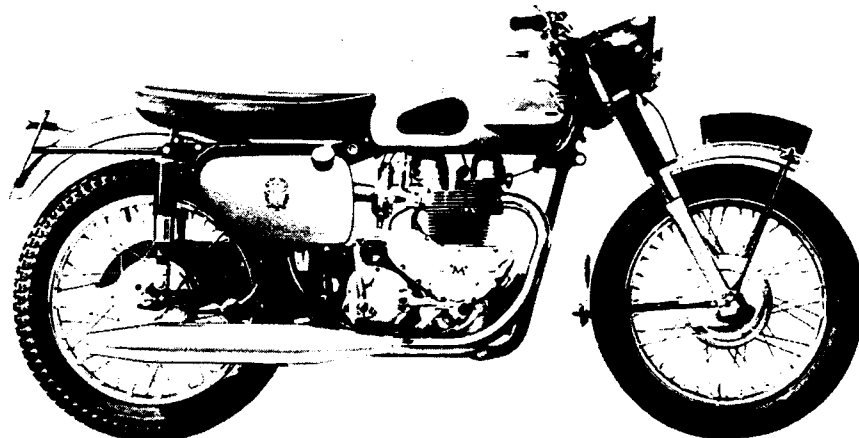
(Bore 77 m.m. x 79.3 m.m. stroke).

Light alloy cylinder heads with cast-in valve seats: chrome plated, stellite tipped valves: multi-rate coil-type springs: one piece rockers adjustable by eccentric spindles, which are mounted between pillars integral with heads: hiduminium push-rods with hardened steel end cups: lever cam followers with Delchrome bearing pads: separate camshafts mounted fore and aft of engine: three bearing crankshaft supported by two large diameter roller bearings and plain oil-distribution centre bearing: indium flashed lead bronze big-end bearings: two piece forged alloy connecting rods: forged alloy pistons with three rings:

separate fine grain cast-iron cylinder barrels: two new camshaft driven type oil pumps (the pumps are double the capacity of those fitted to 1962 models): Ignition on G12CS and G12CSR by manually controlled magneto, and on G15 by battery and coil: carburetion on all by single 1½" Amal Monobloc: Exhaust system on G12CS by 1½" diameter siamezed pipes and cylindrical silencer and on G12CSR and G15 by separate pipes and two new high capacity mufflers: compression ratio—G12CSR and G12CS—8.5:1, on G15—7.3:1.

TRANSMISSION

Four speed Matchless gearbox driven



Matchless G-12 CSR 650 c.c. Twin.

through multi-plate clutch which incorporates a rubber vane type shock absorber: positive gear shift by foot operated pedal: light alloy gearbox shell: heavy duty primary chain runs in cast alloy oil bath: gearbox is a separate unit from engine, and is mounted with engine into the frame by steel plates.

FRAME

Twin tube duplex cradle: single top tube and seat tube: two large diameter looped tubes, brazed together by cross struts and braced, comprise the rear sub-frame assembly. (The tubes are shorter on the G15 than on the 650cc. models, and the rear suspension units are thus sloped forward): complete frame assembly is brazed and bolted, utilizing malleable lugs: a large robust lug at base of seat tube houses self lubricating pivot bush for rear swinging fork.

1963 MATCHLESS MODELS

(Continued from previous page)

petition tank.

G12CSR and G15. Four gallon pressed with knee recesses.

Both types completely rubber mounted at front by expanding rubber bushes, at rear by rubber bands. Tank rests on foam rubber pads.

OIL TANK

4 1/2 pt. pressed steel container bolted up to rear sub-frame.

G15 tank is streamlined.

DIMENSIONS

G12CS. Seat height 32", wheelbase 55.25", ground clearance 6.5".

G12CSR. Seat height 31", wheelbase 55.25", ground clearance 5.5".

G15. Seat height 29.5", wheelbase 55.4", ground clearance 5.5".

COLOR FINISH

G12CS: Primarily black, with red and chrome gas tank, red oil tank and toolbox. Usual parts chrome plated or polished alloy.

G12CSR: Primarily black, gas tank red and chrome; blue oil tank and toolbox. Usual parts chrome plated or polished alloy.

G15: Primarily black, with red gas tank, red oil tank and toolbox. Usual parts chrome plated or polished alloy.

EQUIPMENT

Full lighting equipment, mufflers, speedometer, rear number plate, pillion footrests, toolkit and instruction book and are all fitted as standard.

The following can be supplied as optional extras: Q.D. wheel, air cleaner

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