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FOUR-STROKES de de de de

# A.M.C's FOUR-STROKES

Here at last, in one see - everythingat-a-glance catalogue, you can weigh-up the strength of the A.M.C. Four-Stroke Force. Now you can make instant comparisons between machines, without having to refer to separate catalogues.

This miniature 'library' of A.M.C. models, from 250cc to 750cc, includes machines in every capacity class, in all three marques, to cater for every requirement.

Take your pick...from twins and singles, big and small, touring and sports roadsters, competition machines...whatever your A.M.C. choice, you can be sure it's a leader in its class.

Reared from championship stock, all A.M.C. machines get the full test treatment, both in our Inspection Shops and on the road, before leaving the factory. Built to go places, power is apparent in every purr of their well-bred engines.



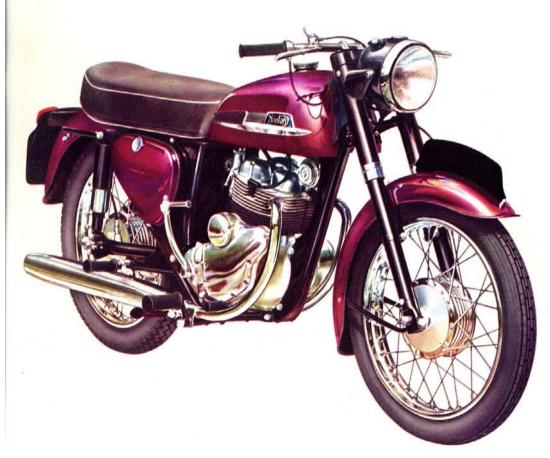
# THREE TWO-FIFTIES

Two Singles—and a Twin! The Singles, known throughout the motorcycling world for their potency and reliability, now gain stepped-up vitality through even finer tuning. Internal gear ratios have been altered, raising first, second and third, and giving closer ratios overall. Now, single cylinder motor cycling offers an exciting new dimension of riding pleasure.

The 250cc Twin is, of course, the Norton Jubilee. Well-known as the only British two-fifty high camshaft four-stroke twin cylinder motor cycle, it remains unchanged, serving as it stands, as both a reliable ride-to-work mount, and as a zippy tourer.

All three machines are sturdily built, with the performance and handling expected of machines with a history of racing and competition wins.

# Norton JUBILEE



Learner or experienced rider... the Norton Jubilee welcomes all-comers — earns this enthusiastic support from the weekly magazine 'Motor Cycle'.

Brisk acceleration..."With a time of 19.4 secs. for the standing start quarter mile, the Jubilee was certainly not lacking in this respect".

"A high standard of exhaust silencing".

"For main-road cruising the speedometer could be kept on the 60 m.p.h. mark indefinitely."

"Handling was good and the Jubilee could be guaranteed to keep on line".

"A comfortable riding position... was another feature appreciated on long journeys".

"Clutch operation was light . . . "

"Lighting was adequate for 60 m.p.h. cruising . . ."
Performance figures from the same source:—
Highest one-way speed 75 m.p.h.

Petrol consumption 104 m.p.g. at 30 m.p.h., 76 m.p.g. at 50 m.p.h.

Braking 30 ft. from 30 m.p.h.

Minimum top gear speed 16 m.p.h.

#### SPECIFICATION

Engine—249cc. o.h.v. twin cylinder; 60mm bore x 44mm stroke; twin high level camshafts: alloy cylinder heads: multirate coil valve springs; one piece rockers—short duralumin pushrods; one piece forged steel crankshaft supported by ball journal and roller bearings; plain bigend bearings; two piece alloy connecting rods; alloy pistons (c.r. 8.75:1); cast-iron cylinder barrels; crankshaft driven gear type oil pump; carburetion by single Amal Monobloc; ignition by twin coils and dual contact breakers.

**Gearbox.** Integral 4-speed gearbox unit driven by a duplex chain, with adjustable tensioner, through a multiplate clutch with built-in, vane-type rubber shock absorber.

Forks. Extremely efficient, multi-rate, telescopic type giving riding comfort at all speeds with roadholding and steering in the best Norton tradition.

Frame. Duplex type with very rigid centre channel section and pressed steel front member. Two-way hydraulically damped rear swinging arm pivoting on bonded rubber bushes.

Brakes. 6" dia. x 1" smooth acting, efficient with full width hubs front and rear and chromium styling flanges. Lighting Equipment. Crankshaft mounted alternator: 13 a.h. battery; powerful quickly adjustable 7" headlamp with pre-focus double filament bulb. Wide-angle rear stop light with built-in reflector.

Tyres. Avon, high hysteresis 3.25 x 18 rear, 3.00 x 18 front.

Optional Extras. Fully enclosed rear chain-case. Colour Finish. Flamboyant Burgundy and Black.

# Matchless G2CSR MONITOR NINETY & 14CSR SAPPHIRE NINETY

A first-place win by A.J.S.—9 laps ahead of its nearest rival—in the 250cc class of the Thruxton 500 mile Race for Production Machines—proof indeed of the speed, handling and reliability contained in these tough little machines.

Additional tuning of the engine includes an increase in compression ratio, modification of the piston and fitment of coil valve springs. The exhaust system alterations take in the larger and more efficient silencer already fitted to the larger capacity machines. Gear ratios are higher and closer to make more practical use of the extra power available.

#### SPECIFICATION

Engine. 248cc o.h.v. single (70mm. bore x 65mm. stroke). Alloy cylinder head: stellite tipped valves: coil valve springs: built-up rockers: hiduminium pushrods: lever type cam followers: both cams on single shaft: steel connecting rod: caged roller big-end bearings: built-up crankshaft supported by roller, ball and plain bearings: rotary reciprocating plunger oil pump: ignition by battery and coil with independent emergency start circuit.

**Gearbox.** Separate from engine, but polished side covers give appearance of unit construction with engine. 4 speeds; multi-plate clutch; duplex primary chain adjusted by rotation of gearbox shell.

Forks. Teledraulic, two way oil damped, with multirate springs.

Frame of brazed and bolted construction: pressed steel engine under-channel: short triangulated rear subframe: pivoted fork rear suspension controlled by Girling adjustable units.

Lighting 6 volt, 54 watt, crankshaft mounted alternator: 11 a.h. battery: 6" headlamp: combined rear and stoplight with integral reflector.

Wheels. 17" diameter with 3.25" Dunlop tyres.

Brakes. 6" diameter at front and rear: full width hubs. Twinseat Two level foam rubber with waterproof coverings.

Colour finish. Primarily black, with blue and chrome tank (for A.J.S.) cherry red and chrome (for Matchless), and black accessory covers; usual parts are chrome plated... and most of the light alloy components are highly polished.

Optional Extra. Range of dolphin fairings.





# A CHOICE OF EIGHT

Designed and produced primarily as reliable, economical touring machines, every bike in this 250cc to 500cc line-up possesses

a sufficient turn of speed to maintain surprisingly high averages when used in that capacity.

Six are single cylinder machines, with engines based on the highly successful AMC scrambles models, including once again 350 and 500 Nortons. Two twins complete the picture... one the well established and potent Navigator—the other the unique ES400, with push-button electric starter.



Rapid acceleration belies the low-paced luxury look of the Norton ES400. Built to top-quality specification, the keynote here is PERFORMANCE. Features include push-button electric starter, parallel twin engine, 12-volt electrics, the same brakes as the 750 Atlas, 'Roadholder' forks and direction indicators. Its extraordinary efficiency has won it the praise of experts. This is what the "Motor Cycle News" has to say:— "It bettered standing start quarter mile times of a really 'hot' 500cc. single"... and "...its sizzling acceleration". "So safe is the Norton's steering, in wet and dry". "... not even the cold and damp weather prevented the motor firing at a touch on that little red button". "Both brakes... are powerful and smooth". Performance figures from M.C.N.:—

Maximum speed 88 m.p.h. Standing start quarter mile 15.75 secs. Braking 30 ft. from 30 m.p.h.

#### SPECIFICATION

Engine. 384cc (66mm bore x 56mm stroke) high level camshaft parallel twin cylinder: alloy cylinder head: valves of special Silicon chromium valve steel: one piece rockers: short duralumin pushrods: separate gear-driven camshafts: one piece forged steel crankshaft, supported by a large diameter ball journal and roller bearings: alloy connecting rods: alloy pistons, compression ratio 7.9:1: cast-iron cylinder block: crankshaft driven gear type oil pump: single Amal Monobloc-choke size \( \frac{3}{8}'' : Ignition by twin coils and dual contact breakers. \)

Electric Starter. Lucas 12v. type M3 starter motor: drive to engine crankshaft via pawl and ratchet mechanism. Transmission. 4 speed gearbox integral with engine: new design heavy duty wide tooth pinions: multi-plateclutch: duplex primary chain adjusted by nylon slipper: kickstarter is retained.

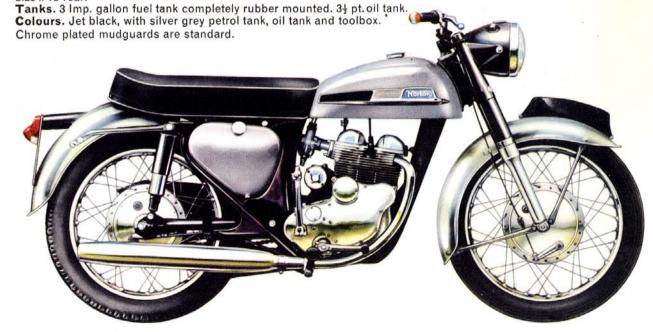
**Frame.** Welded and bolted construction: front down member of aerofoil section: twin main-frame tubes are bolted to front down member at top and bottom, and form the tank rails, rear frame loops and engine cradles: centre box section provides rear engine unit mounting and central support for swinging fork pivot.

Rear Suspension. Swinging fork pivots on bonded rubber bushes: movement controlled by Girling hydraulically damped spring units.

Forks: "Roadholder" forks: progressive two way oil damping: single rate springs housed within large diameter tubular stanchions: light alloy sliders, with chromed extensions.

**Lighting.** 12 volt, 90-100 watt, crankshaft mounted alternator: two 6 volt large capacity batteries: adjustable 7" diameter headlamp: 50w/40w head bulb: rear light has a combined stoplight and integral reflector. Direction lights fitted to handle-bar ends.

Wheels & Brakes. Large alloy hubs as fitted to 750 Atlas: front brake drum cast into hub: one piece rear drum and sprocket separate from hub: ball journal bearings: brake sizes—front 8" x 1\frac{1}{4}", rear 7" x 1\frac{1}{4}". Tyres—3.00 x 19 front, 3.25 x 18 rear.



Based on the winning formula that has produced so many scrambles victories, these Matchless and A.J.S. single cylinder engines guarantee potent and reliable performance.

Apart from a few components, which would otherwise make them unsuitable for roadwork, the 500 engines are identical to those used by our works riders in television scrambles series.

Using the same bottom end, the 350's have a more highlytuned engine in relation to the bigger models, out-powering most other machines of comparable size.

As yet, no independent road test reports are available, but AMC experience proves that these machines combine both ease of handling and economy.

#### SPECIFICATION

Engine. Model G3/16 348cc o.h.v. single (72 mm bore x 85.5 mm stroke) Model G80/18 497cc o.h.v. single (86 mm bore x 85.5 mm stroke) Alloy cylinder head: stellite tipped valves; hairpin valve springs:built-up rockers: hiduminium pushrods:mushroom type cam followers: separate cam wheels: built-up crankshaft, with individually balanced steel fly wheels and two-piece crankpin. supported by ball, roller and plain main bearings: duralumin caged roller big-end bearing: steel connecting rod: alloy piston: cast iron cylinder barrel with integral pushrod tunnels: gear type oil pump : ignition by battery and coil with independent emergency start circuit.

Gearbox. Separate four speed box: wide tooth heavy duty pinions: multi-plate clutch with integral rubber, vane shock absorber: primary drive housed in cast alloy oil bath.

Lighting. 6 volt. 60 watt crankshaft mounted alternator: 11 a.h. battery: 7" headlamp: combined rear and stop light with integral reflector.

Colour Finish. All black and chrome.

Optional. Sidecar specification-special forks, gears and sus-

Optional Extras. Range of dolphin fairings. Full enclosed rear chaincase. Air cleaner. Steering damper. Front and rear safety

Cycle parts. as 650cc Swift and Majestic.





500cc. Model 18 STATESMAN



Endorsed by the weekly magazine 'Motor Cycling', the Norton Navigator represents yet another aspect of A.M.C.'s versatile outlook on twin cylinder motor cycling.

In a comparative test with an earlier Navigator, the independent report in 'Motor Cycling' had

this to say:-

"Today's acceleration graph shows reassuring increase in speed build-up...starting was easy...and throttle response at all engine rpm unhesitant." Commenting on the race-bred 'Roadholder' forks and the large brakes, 'Motor Cycling's expert continued: "The result is a pleasant machine possessing twin safety aspects of impeccable navigation and near-unbeatable braking." An emergency stop was accomplished in *one yard less* than the ususal accepted stopping distance.

'Motor Cycling's' final pay-off justifies the confidence with which A.M.C. present the Navi-

gator:-

"The Navigator must have a particular appeal to new riders who have served their novitiate under 250 legislation and are now looking for more performance whilst retaining lightness and handling of their original mount."



**SPECIFICATION.** As Jubillee except 63mm bore x 56mm stroke, and Roadholder forks and front Hubs colour scheme is blue and black.

A flood of requests, both from home and overseas, prompted the return of these large capacity singles into the Norton range.

Rated with the best on performance, reliability and economy, both machines have the confident power of well-proved engines. Backed by the use of an established frame and the famous 'Roadholder' forks, these Nortons ride the road ... hold the road . . . handle like a Norton . . .



Norlon) 350cc. Model 50 Mk II 500cc. Model ES2 Mk II

#### SPECIFICATION

Engines. Model 50 348cc o.h.v. single (72mm bore x 85.5mm stroke) Model ES2 497cc o.h.v. single (86mm bore x 85.5mm

Alloy cylinder head: chrome plated, stellite tipped valves: exhaust valve lifter fitted: hairpin valve springs: built-up rockers housed in detachable light alloy rocker box: hiduminium pushrods: mushroom type cam followers: separate cam wheels: built-up crankshaft, with individually balanced steel fly-wheels and twopiece crankpin, supported by ball, roller and plain main bearings: duralumin caged roller big-end bearing: steel connecting rod: alloy piston: cast iron cylinder barrel: gear type oil pump driven off timing side crankshaft: ignition by battery and coil with independent emergency start circuit. Gearbox. Separate four speed box: light alloy shell and covers: wide tooth heavy duty pinions: multi-plate clutch with integral rubber vane shock absorber: primary drive housed in cast alloy oil bath. Frame. Brazed and bolted construction with integral sidecar lugs: twin tube duplex cradle: rear sub-frame loops are short and rear swinging fork braced for rigidity: rear suspension controlled by fully adjustable oil damped Girling units.

Forks. "Roadholder" forks with built-in thief proof lock: progressive two way oil damping: single rate springs housed within large diameter heat treated tubular stanchions: light alloy sliders, with chromed steel extensions.

Wheels, 18" diameter chrome plated steel rims: heavy duty spokes. Fitted with Dunlop high hysteresis tyres.

Hubs and Brakes. Large diameter alloy hubs: front brake drum cast into hub: one piece rear drum and sprocket separate from hub: ball journal bearings. Brake sizes-front 8" x 11" rear 7" x 11"

Lighting. 6 volt. 60 watt crankshaft mounted alternator: 11 a.h. battery: 7" headlamp: combined rear and stop-light with integral reflector.

Tanks. 4 gallon petrol tank, completely rubber mounted: single two-level tap. 4 pint oil tank.

Colour Finish. All black and chrome.

Optional. Sidecar specification-special

forks, gears and suspension.

Optional Extras. Range of dolphin fairings. Fully enclosed rear chaincase. Air cleaner. Steering damper. Front and rear safety bars.

# NINE BIG TWINS

A.M.C. set the pace—nine times over with this battery of big twins, varied enough to cater for every personal preference.

New on the scene, the 750cc A.J.S. and Matchless models, powered by the proved Altas engine. Seven well-known favourites complete the line-up, including the Norton Altas and Sports Specials, one of which is the three-times running winner of the Thruxton 500 Mile Production Machine Race. Only minor alterations have been made to these tried and trusted machines.

The 650 models in the A.J.S. and Matchless ranges are virtually unchanged retaining the familiar characteristics such as race-bred 'Roadholder' forks, hubs and 12-volt electrics. Sidecar enthusiasts please note:— special forks, suspension and gearing available at no extra cost.





# Matchless 650cc. G12 MAJESTIC § 650cc. 31 SWIFT

A.M.C. have spent years on extensive development and research to achieve the new standard of reliability now common to both these models. Vital alterations to improve oil pump efficiency have resulted in a circulation of 54 gallons per hour at 4000 rpm, ensuring an absolutely positive supply to all bearings and moving parts. Forged cam followers are indestructable, thanks to stellite facing on the pad and extra strengthening webs. The crankshaft is made from material of four times greater tensile strength than previously. Well-known for good all-round pulling power, these twins have twin contact breakers, giving more positive timing on individual cylinders.

#### SPECIFICATION

Engine. 646cc o.h.v. vertical twin (72mm bore x 79.3mm stroke). Both the barrels and heads are separate for ease of maintenance. Alloy cylinder heads: stellite tipped valves: coil valve springs: one piece rockers adjustable by eccentric spindles: hiduminium pushrods: lever cam followers: separate gear-driven camshafts: one piece three bearing crankshaft: plain big-end bearings: forged alloy connecting rods: alloy pistons: cast-iron cylinder barrels: two camshaft driven gear type oil pumps: ignition by battery and coil.

**Gearbox.** Separate four speed box: wide tooth heavy duty pinions: multi-plate clutch with integral rubber vane shock absorber: primary drive housed in cast alloy oil bath.

Frame. Brazed and bolted construction, with integral sidecar lugs: twin tube duplex cradle: rear sub-frame loops are short and rear swinging fork braced for rigidity: rear suspension controlled by fully adjustable oil damped Girling units.

Forks. "Roadholder" forks with built-in thief proof lock: progressive two way oil damping: single rate springs housed within large diameter heat treated tubular stanchions: light alloy sliders, with chromed steel extensions.

Wheels. 18" rims: large diameter alloy hubs: front brake drum cast into hub: one piece rear drum and sprocket separate from hub: ball journal bearings: Brake sizes—front 8" x  $1\frac{1}{4}$ " rear 7" x  $1\frac{1}{4}$ ".

Tanks. 4 gallon petrol tank, completely rubber mounted: 4 pint oil tank.

**Lighting.** 12 volt. Crankshaft mounted alternator: two 6 volt batteries: Zene. diode: adjustable 7" headlamp with 50w/40w head bulb: combined rear and stop light with integral reflector.

Colour Finish. All black and chrome.

Optional. Sidecar spec.—special forks, gears, suspension. Siamesed exhaust.

Optional Extras. Range of dolphin fairings. Magneto ignition. Steering damper. Air cleaner. Front and rear safety bars. Fully enclosed rear chaincase.



# 例 650cc. 31CSR HURRICANE Matchless 650cc. G12CSR MONARCH

SPEED...SAFETY...HANDLING EASE...A.M.C.'s winning formula—translated here into two exceptional twins. Stepped-up speed—yours with the optional extra speed-kit, which does not affect the low down flexibility of the motor's pulling power.

Safety—summed-up by top-rate roadholding and braking, goes hand in hand with steering light enough to ensure complete handling ease.

#### SPECIFICATION

Specification is similar in many respects to the standard 650cc twin, but, with the following alterations.

Engine. Highly tuned with 8.5:1 compression ratio, Magneto ignition.

Mudguards. Chrome plated steel blades.

Colour Finish. Black frame, fork covers etc. with cherry red (A.J.S. blue) and chrome petrol tank and cherry red (A.J.S. blue) oil tank and toolbox.

Optional Extras. Range of Dolphin fairings. Speedkit comprising twin carburettors, h.c.pistons and special camshafts. Rev-Counter. Steering Damper. A racing magneto and separate exhaust system can be fitted if the speedkit is supplied as original equipment.



# Norton SPORTS SPECIALS

THREE OUTRIGHT WINS IN SUCCESSION... that's the triumphant score of the 650 Sports Special in the International Thruxton 500 Mile Race—whilst the 88 SS won its class on *three consecutive occasions* in long-distance events.

Such victories are achieved by the fabulous Norton combination of inherent power . . . literally designed *into* the engine—absolute reliability and incomparable roadholding. The Featherbed frame and 'Roadholder' forks are the criterion by which all others are judged, and copied the world over in an effort to equal Norton's grip of the road.

The gearbox (best in the business) can be summed up in one word:—"Indestructible".

A brief round-up of other standard features would include:—12-volt lighting, powerful brakes, a sensible riding position and a quality finish.



**8855** 

#### SPECIFICATION

Engine. 88SS. 497cc o.h.v. vertical twin (66mm bore x 72.6mm stroke). 650SS. 647cc o.h.v. vertical twin (68mm bore x 89mm stroke). Alloy cylinder head with integral rocker box: parallel induction tracts with large diameter inlet valves: forged steel rockers: alloy push-rods: large diameter tappets: single chain-driven camshaft: built-up forged steel crankshaft with large diameter central iron flywheel: plain big-end bearings: 2-piece connecting rods: alloy pistons: one-piece cast-iron cylinder block: crankshaft driven gear type oil pump: carburation by twin Amal Monoblocs: ignition by magneto, with automatic advance and retard.

Gearbox. Separate 4-speed, with medium-close ratios: wide tooth heavy duty pinions: driven through five plate clutch which incorporates rubber vane shock absorber: single primary chain housed in pressed steel oil bath.

Frame. The famous Norton 'Featherbed' with its race-bred handling and road-holding.

Forks. 'Roadholders' with built-in thief-proof lock: progressive two-way oil damping: single rate springs housed within heat treated tubular steel stanchions: light alloy sliders with chromed steel extensions.

Wheels. 19" diameter chrome plated steel rims fitted with Avon high hysteresis tyres—sizes: Front 3.00 x 19; Rear 3.50 x 19 Grand Prix. Hubs and Brakes. Large diameter alloy hubs: front brake drum cast into hub; one-piece rear drum and sprocket bolted up to hub; ball journal bearings. Brake sizes—Front 8" x  $1\frac{1}{4}$ ". Rear 7" x  $1\frac{1}{4}$ ".

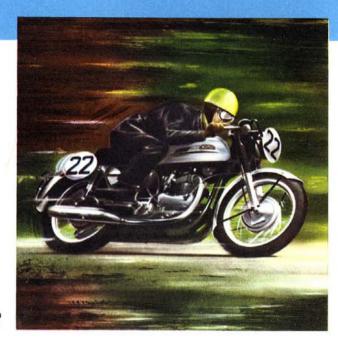
Lighting. 12-volt: crankshaft mounted alternator: two 6-volt batteries mounted in series: Zener diode: adjustable 7" diameter headlamp with 50/40w. double filament head bulbs: combined rear and stop light with integral reflectors.

Tanks. 3.5 gallon petrol tank, completely rubber mounted: single two-level tap: 4.5 pint oil tank.

Colour Finish. Jet black primarily with silver petrol tank and chrome plated mudguards.

Optional. Sidecar forks, gears and suspension.

Optional Extras. Dolphin fairings. Rev. counter. Fully enclosed rear chain-case. Steering damper. Safety bars.



650SS



This rugged performer received an overwhelming vote of confidence from the professionals, when road-tested by the Motor Cycle News, as you can judge from these enthusiastic extracts:—

"It's amazing what 100cc. can do! Especially when added to what is already a superb machine (the 650SS)."

"There is far more power low down than from the 650 . . . . "

"The Norton Atlas is certainly very fast—effort-lessly so. Acceleration is tremendous, too . . . . "And in congested traffic conditions, it is amazing just how genteel the big Norton could be."

"There is no need to go into the impressions of the handling steering, or brakes—one word described it—Norton."

These are just a few extracts from Motor Cycle News road test.

Engine. 745cc o.h.v. vertical twin (73mm bore x 89mm stroke). Alloy cylinder head with integral rocker box: parallel induction tracts with large diameter inlet valves: forged steel rockers: alloy push-rods: large diameter tappets: single chain-driven camshaft: built-up forged steel crankshaft with large diameter central iron flywheel: plain big-end bearings: 2-piece connecting rods: alloy pistons (c.r. 7.6:1): one-piece cast-iron cylinder block: crankshaft driven gear type oil pump: carburation by twin Amal Monoblocs: ignition by magneto, with automatic advance and retard.

Frame. The famous Norton 'Featherbed' with its race-bred handling and road-holding.

Forks. 'Roadholders' with built-in thief-proof lock: progressive two-way oil-damping: single rate springs housed within heat treated tubular steel stanchions: alloy sliders with chromed steel extensions.

Wheels. Chrome plated steel rims fitted with Avon high hysteresis tyres—sizes: Front 3.25 x 19: Rear 4.00 x 18.

Hubs & Brakes. Large diameter die-cast alloy hubs: front brake drum cast into hub: one-piece rear drum and sprocket bolted up to hub: ball journal bearings. Brake sizes—Front 8" x 1\frac{1}{4}": Rear 7" x 1\frac{1}{4}".

Lighting. 12-volt: crankshaft mounted alternator: two 6-volt batteries mounted in series: Zener diode: 7" dla. headlamp with 50/40w. double filament head bulb: combined rear and stop light with integral reflector.

Tanks. 3.5 gallon petrol tank, completely rubber mounted: single two-level tap. 4.5 pint oil tank.

Colour Finish. Jet black primarily with cherry red petrol tank and chrome plated mudguards.

Optional. Sidecar forks, gears and suspension. Handlebars.

Extra. Rev. counter.

# Norton 750cc. ATLAS



# Matchless 750cc. Model G15 4 750cc. Model 33



Get the best of both worlds with these racy 750's. Although new to many, they in fact embody features which have been proved through years of use. The most outstanding qualities of the Matchless and A.J.S. machines are blended powerfully with the potent Atlas engine, resulting in incredible speed vitality, coupled with superb roadholding and braking.

Just look at the specification:— exceptionally powerful engine, twin carburettors with air cleaner, magneto ignition, 12-volt electrics, duplex cradle frame, 'Roadholder' forks, eight inch front brake, four gallon tank, deep valanced mudguards, alloy chaincase, quality finish.

These machines merit a personal trial now. Visit your dealer today, and let your own skill prove just how exciting they are.

#### SPECIFICATION

Engine. 750cc o.h.v. vertical twin (73mm bore x 89mm stroke): alloy cylinder head: parallel induction tracts with large diameter inlet valves: forged steel rockers: alloy pushrods: iron alloy tappets: single high performance camshaft: built up forged steel crankshaft with large diameter central iron flywheel: plain big end bearings: two piece connecting rods: alloy pistons: cast iron cylinder: gear type oil pump: carburetion by twin Amal Monoblocs: ignition by Magneto with automatic advance and retard.

Transmission. Separate four speed gearbox: wide tooth heavy duty pinions: driven through five plate clutch: primary chain housed in cast alloy oil-bath. Frame. Brazed and bolted construction: twin tube duplex cradle: rear sub-frame loops are short and swinging fork braced for rigidity; rear suspension is controlled by fully adjustable oil-damped Girling units.

Forks. "Roadholder" forks with built in thief proof lock: two way oil damping: large diameter heat treated tubular steel stanchions: alloy sliders with chromed steel extensions.

Wheels. Large diameter alloy hubs: front brake drum cast into hub: one piece rear drum and sprocket separate from hub: ball journal bearings. Brake sizes—8" x  $1\frac{1}{4}$ " front, 7" x  $1\frac{1}{4}$ " rear. Tyres 3.50 x 18 and 4.00 x 18.

Lighting. 12 volt crankshaft mounted alternator: two 6 volt batteries mounted in series: Zener Diode: 7" headlamp; 50w/40w head bulb: combined rear and stop light with integral reflector.

Tanks. 4 gallon petrol tank completely rubber mounted: single two level tap. 4 pint oil tank.

Colours. All black and chrome.

Engine. 497cc (86mm x 85.5mm) all alloy o.h.v. single developed

solely for scrambling.

1 %" choke diameter Amal Grand Prix carburettor: alloy cylinder head with cast-in valve seats, and central plug: 13" dia. open exhaust pipe: chrome plated, stellite tipped valves: exhaust valve lifter fitted: racing duplex hairpin valve springs: built up rockers housed in detachable light alloy rocker box: separate inspection cover: hiduminium push-rods with hardened steel end cups: mushroom type cam followers: special high lift cams (type HS) on separate pinions: built up crankshaft (individually balanced) with steel flywheels and two piece crankpin (alloy steel centre pin with hardened steel sleeve) supported by two-ball journal, one roller and one plain, main bearings: duralumin caged single row roller big-end bearing: forged steel connecting rod with pressed in hardened liner: alloy piston (standard C.R.8.7: 1): alloy cylinder barrel with low friction iron liner; gear-type oil pump driven by timing side of crankshaft: manually controlled Lucas waterproof competition magneto (breather pipe terminates under petrol tank), driven by chain; alloy timing chest: level high exhaust pipe.

Gearbox. Separate medium-close ratio four speed gearbox: alloy shell: wide tooth heavy duty pinions: special multi-plate clutch: single primary chain housed in cast alloy oil-bath:rubbervane shock absorber integral with clutch: foot operated gear pedal: folding kickstarter.

Frame. Brazed and bolted construction: twin tube duplex cradle: single top and saddle tubes: two large diameter looped tubes, welded together by cross-bracing struts, form rear sub-frame: large robust lug at base of seat tube houses self lubricating pivot bush for rear swinging fork.

Rear Suspension. Large braced malleable lug into which two heavy duty large diameter tubes are brazed, form a very rigid swinging fork assembly: large diameter heat-treated steel pivot shaft pressed into lug: fork movement controlled by fully adjustable oil damped units.

Forks. Heavy duty 'Teledraulic' forks, designed specially for scrambling; give extra long movement and precise progressive two-way damping: multi-rate springs: large diameter heat-treated tubular steel stanchions: alloy sliders: rubber gaiters: forged steel handle-bar lug and fork crown: crown pinch-bolts act as steering lock stops.

Mudguards. Polished alloy blades, with tubular steel stays.

Wheels. 19" diameter chrome plated steel rims fitted with 3.00" front and 4.00" rear tyres: heavy gauge spokes.

Hubs and Brakes. Slim alloy front hub with cast-in 7" diameter brake drum: wider shoes and linings mounted on webbed light alloy back plate: two ball journals support hub on high tensile steel spindle. 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 filling: waterproof Vynide covering.

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

Oil Tank. 4.5 pint pressed steel tank bolted up to rear sub-frame. Air Filter. (Standard fitting) Flat "works" pattern mounted on offside, and up to rear sub-frame. Concertina shaped felt and guaze element. Handlebars. Fully adjustable with adjustable ball ended controls. Dimensions. Seat height 32": wheelbase 55.25": ground clearance 64": Handlebar width 32": weight 345-lbs.

Colour Finish. All Black with optional Blue (A.J.S.) or Cherry Red (Matchless) tanks and air filter. Usual parts chrome plated.

# 45 500cc. Model 18CS "SOUTHERNER" Matchless 500cc. Model G80CS "MARKSMAN"

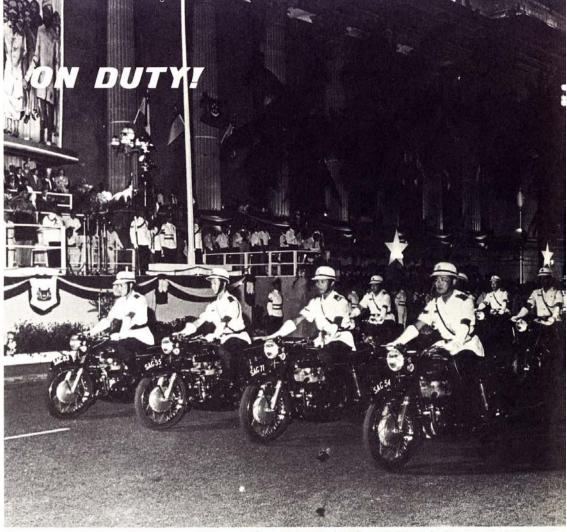


A.J.S. Matchless and Norton join the police force... and many other government services for that matter. Ever-increasing numbers take to the road on official business every day, both in Great Britain and throughout the world... two-wheeled ambassadors of British engineering skill.

Every machine in this catalogue is suitable for such work, and can be supplied with extra equipment wherever necessary. The versatility of the larger-capacity models makes them particularly useful, and each can be fitted with the following equipment:—

Single seat; calibrated and certified speedometer; enclosed rear chaincase; front and rear safety bars; a variety of fairings; leg shields; rear carrier; pannier equipment; special sidestand; full radio equipment; siren or klaxon; "crawler" bottom gear.

The co-operation of our Sales Managers is assured. Just name your individual requirements











# VOLUNTEER EMERGENCY SERVICE

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A.J.S. & Matchless Owners Club Norton Owners Club

These two clubs are organised, completely independently of A.M.C., by motor cyclists for owners of machines produced at Woolwich. The names and addresses of the Secretaries are available from our Publicity Department.

### **GUARANTEE**

All A.M.C. machines are sold subject to the general terms of the limited guarantee adopted by the British Cycle and Motor Cycle Industries Association Ltd. Details are available from your local dealer.

Specifications and prices are subject to alteration without prior notice.

Matchless Motor Cycles Ltd. first and foremost makers of motor cycles 44 Plumstead Road, London S.E.18, England. Telephone: WOOlwich 1223—Telex. 22617.



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