

Quality Motor Cycles for Every Occasion

Introducing the 1956 Models

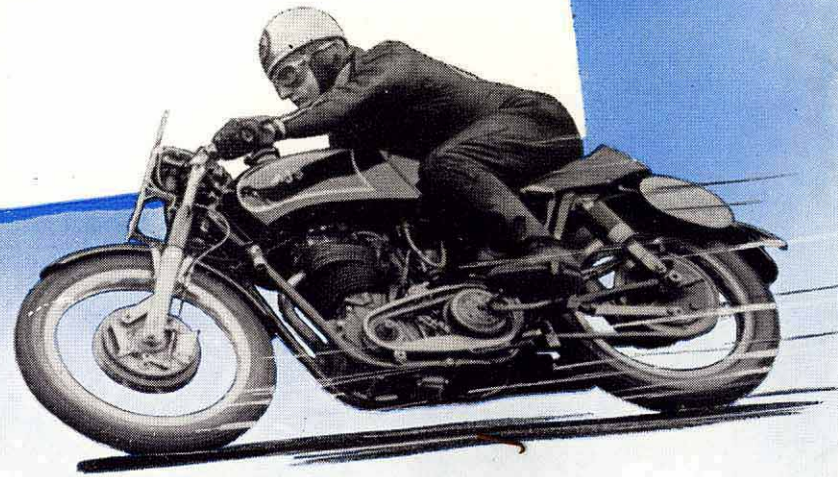
A name that has been internationally famous for many years, as a result of innumerable racing, competition and other successes, requires no introduction. As, however, the 1956 range of A·J·S motorcycles incorporate many improvements that have been evolved during the past 12 months, as a result of intensive development work, we are certain that the following details will be appreciated by all A·J·S enthusiasts and potential owners throughout the world.

The oil-damped system of swinging arm rear suspension developed by the A·J·S racing models has achieved universal popularity with such rapidity that it is standardized on all models for the 1956 season.

The styling of all road models has been greatly improved, without in any way interfering with accessibility or ease of maintenance. The demand for a high performance large capacity model is met by the intriguing new 600 c.c. 'Springtwin', and the spring frame Model 16MC, used in experimental form with such success in 1955 events, efficiently fills the need of the ambitious Clubman.

In its latest form the Racing Model 7R will still further enhance its reputation as the fastest and most dependable mount for the private owner in International races. Models designed for successful use in Moto-Cross events will be the subject of a separate catalogue.

*Ride A·J·S and
Ensure Success*



A · J · S M O T O R C Y C L E S

Proprietors: ASSOCIATED MOTORCYCLES LTD.

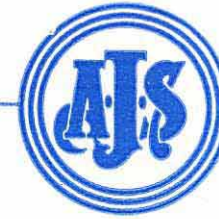
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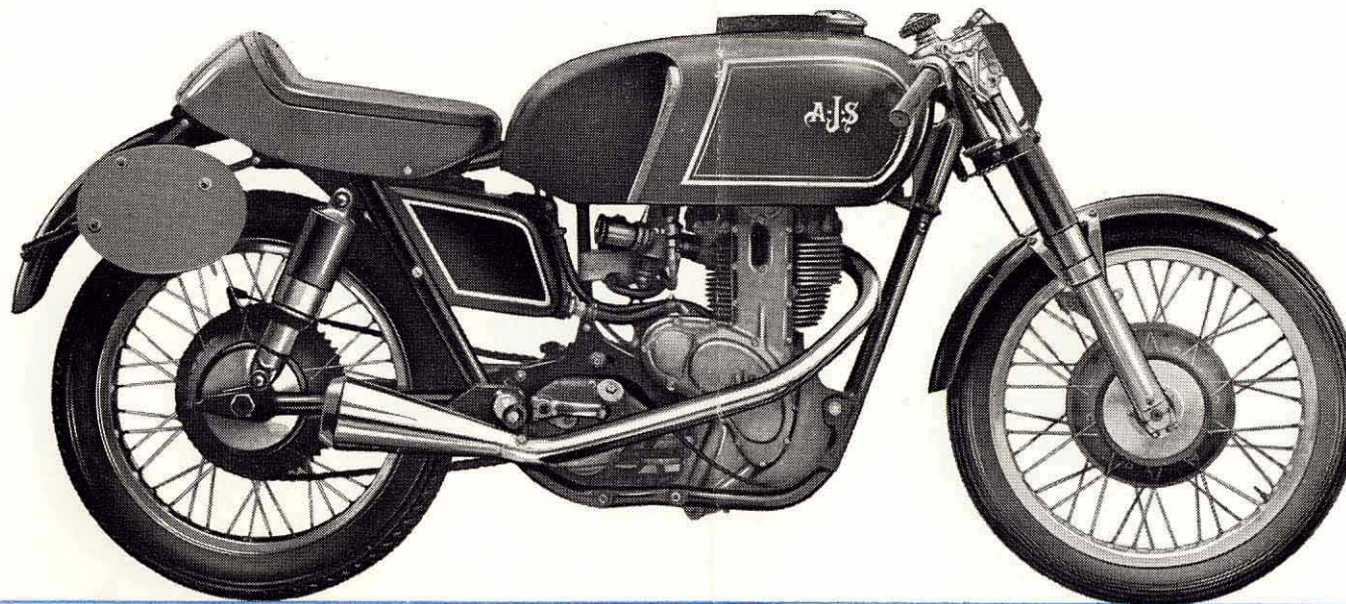
Model **7R** 349 c.c. O.H.C.

The most successful production racing machine ever made, a fact proved by the countless successes achieved by private owners both at home and overseas



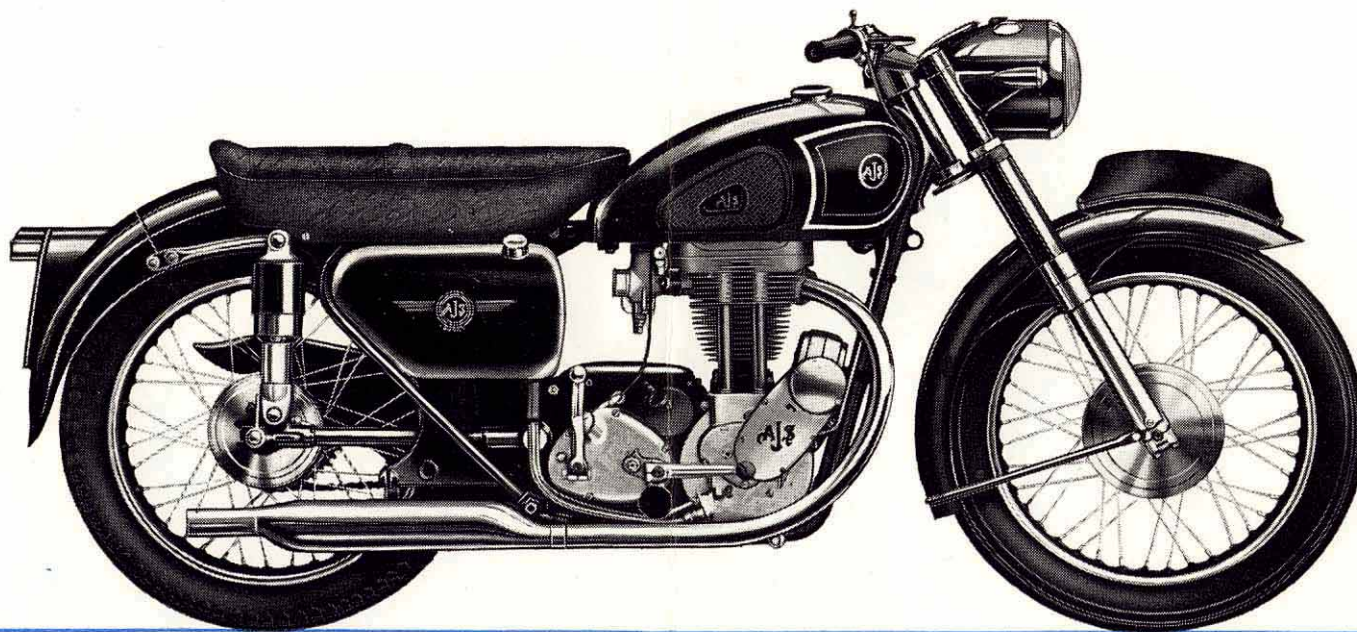
Specification

319 c.c. chain-driven overhead camshaft engine, light-alloy cylinder and cylinder head, twin gear-driven oil pumps. Amal G.P. carburettor, Lucas racing magneto. Develops 37 b.h.p. at 7200 r.p.m. on 82-octane petrol. Fully sprung duplex cradle frame, light-alloy mudguards and tanks of 5½-gallon petrol and 1-gallon oil capacity. Magnesium-alloy wheel hubs, straight spokes and 8½ inch brakes. 2.75 × 19 inch front and 3.25 × 19 inch rear wheels. Rev. counter, two-piece adjustable handlebars, integral seat with back rest, quick-action filler caps, Dunlop racing tyres. Supplied and equipped ready for immediate use in races run under F.I.M. regulations.



Model 16 MS 347 c.c. O.H.V.

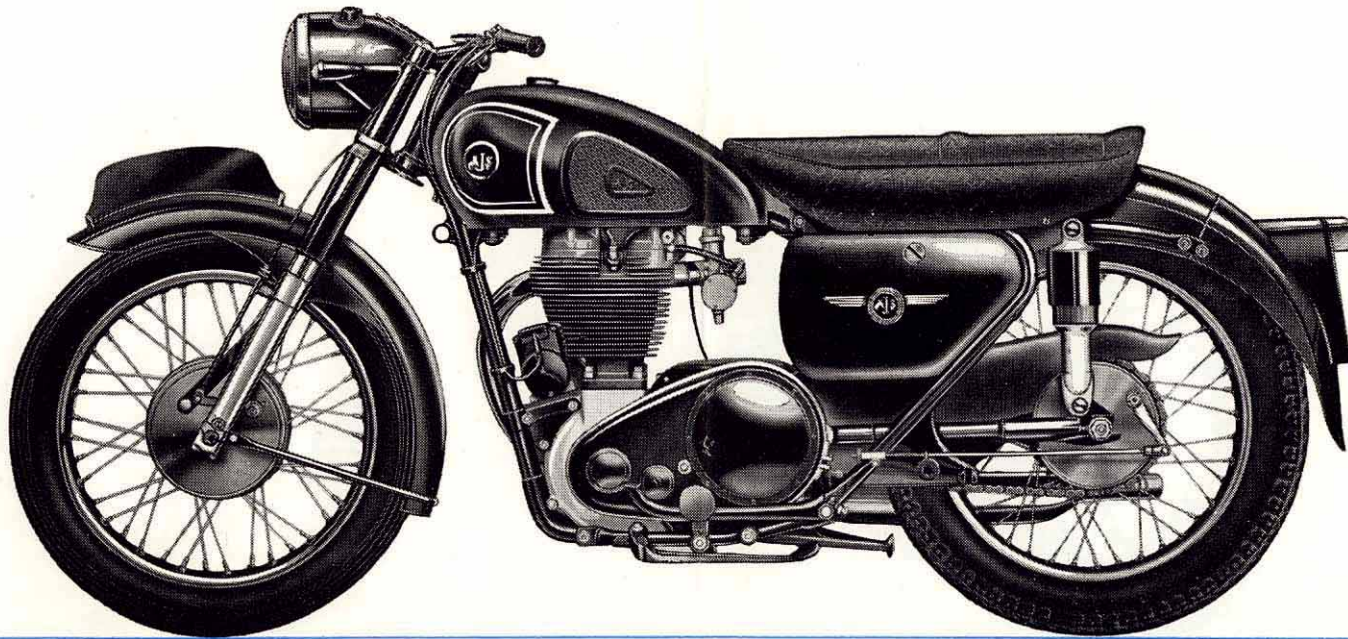
A luxury 350 with an unsurpassed specification, that provides fast, safe and economical motor cycling with an extremely high standard of dependability





Model 18S 498 c.c. O.H.V.

Fast yet docile, the Model 18S is admirably suited to the needs of the solo rider who appreciates an ample reserve of power, or for use with a sidecar attached



For full specification see pages 10 and 11

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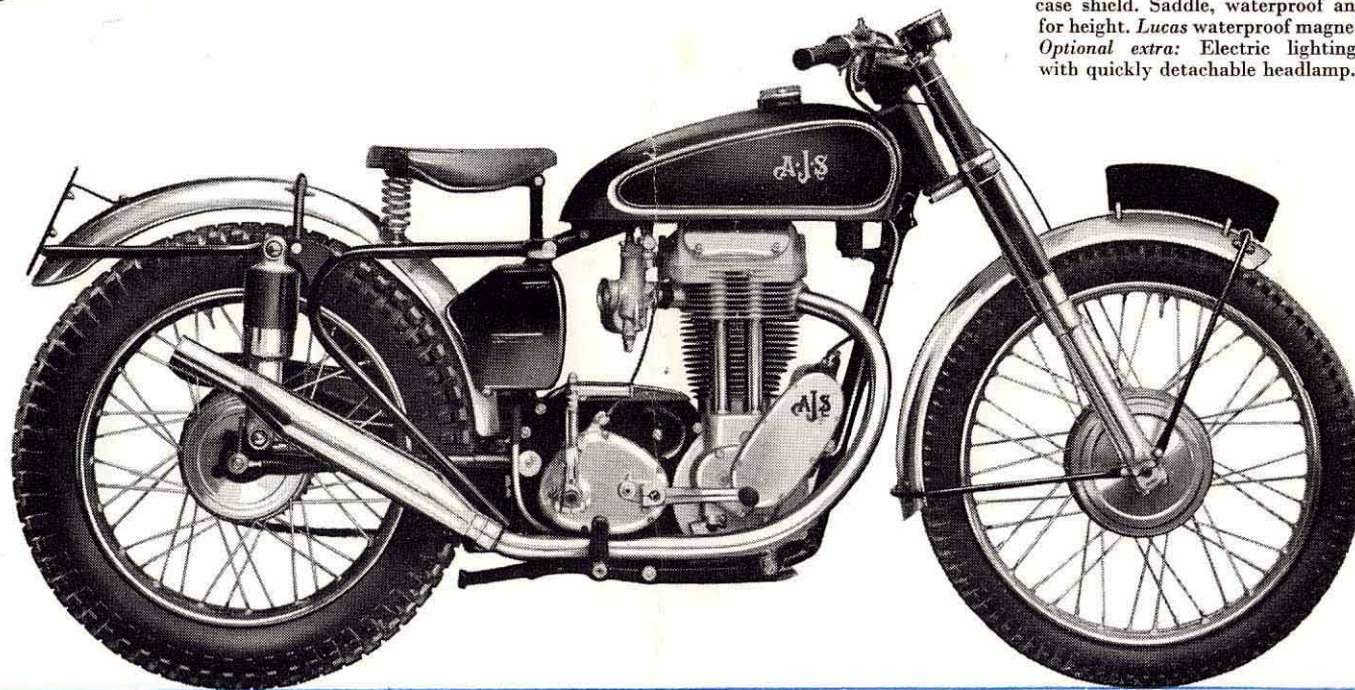
Model **16 MC** 347 c.c. O.H.V.

A direct development of the experimental models that have proved so outstandingly successful in 1955 Open Trials



COMPETITION MODEL

Special short-wheel base frame with heavy gauge tubes and full *Teledraulic* suspension, 350 c.c. o.h.v. high-efficiency engine with light-alloy cylinder barrel and head. 2-gallon light-alloy petrol tank, polished light-alloy mudguards. Light-alloy number plates. Upswept exhaust pipe. Wheels with extra heavy gauge straight spokes, full-width hubs, "Trials" tyres and security bolts. Wide ratio gearbox with foot operated gear change and folding kick-starter. Steel crank-case shield. Saddle, waterproof and adjustable for height. *Lucas* waterproof magneto. *Optional extra:* Electric lighting equipment with quickly detachable headlamp.

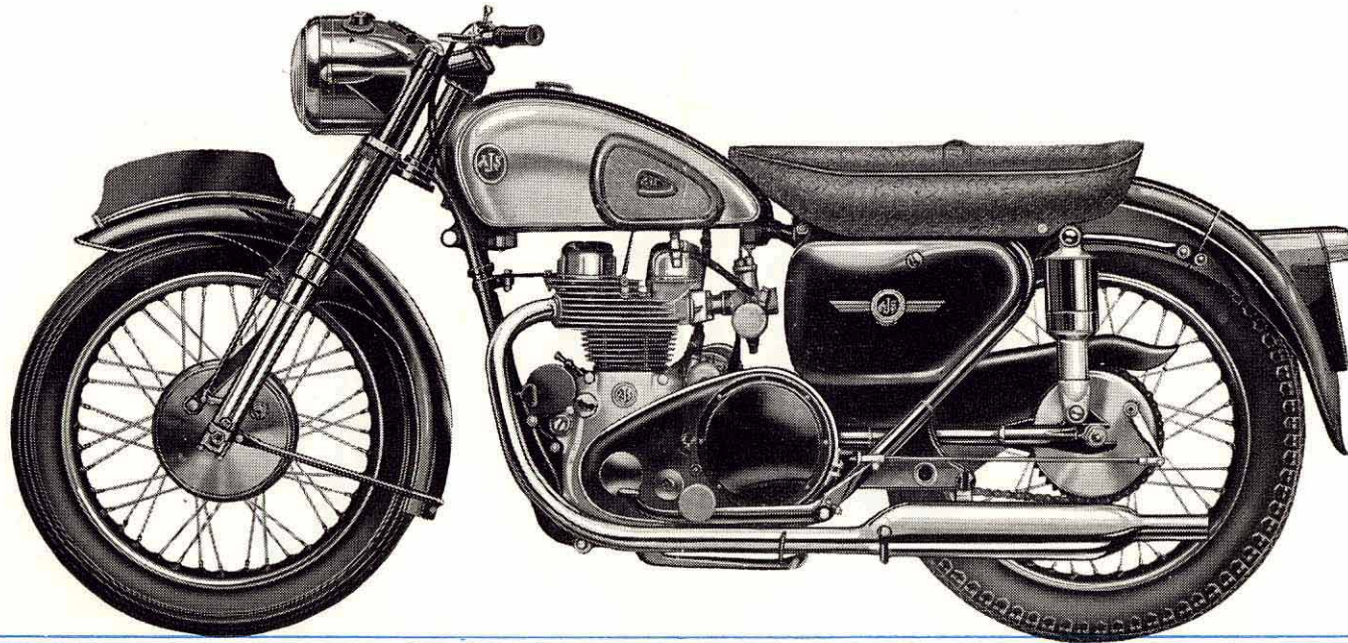




The NEW "SPRINGTWIN"

Model 30 600 c.c. O.H.V.

This new and highly efficient, large-capacity twin provides a performance that is limited only by road conditions



For full specification see pages 10 and 11

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Model **20** 498 c.c. O.H.V.
A model of outstanding interest that provides a high maximum speed with safety, comfort and unfailing reliability

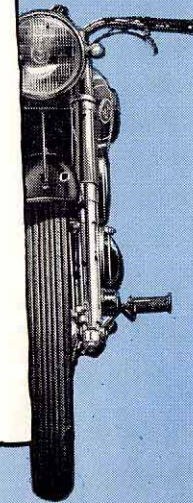


The "SPRINGTWIN"



Technical Information

MODEL	SINGLES		TWINS		16MC
	16MS 350 c.c.	18S 500 c.c.	20 500 c.c.	30 600 c.c.	Trials 350 c.c.
Power—b.h.p. and r.p.m. ...	19 at 5750	25.5 at 5500	30 at 6800	32 at 6700	18 at 5750
Compression ratio ...	7.5 or 6.5	7.3 or 6.3	8.0 or 7.0	7.5 or 6.5	6.5
Valve timing: Inlet opens b.t.d.c. ...	36°	18°		35°	26°
Inlet closes a.b.d.c. ...	51°	69°		65°	53°
Exhaust opens b.b.d.c. ...	50°	50°		65°	64°
Exhaust closes a.t.d.c. ...	30°	30°		35°	25°
Carburettor: Choke size (inch) ...	1 $\frac{1}{16}$	1 $\frac{5}{32}$	1	1	1 $\frac{1}{16}$
Main jet size ...	210	260	240	270	210
Throttle slide No. ...	3	3	4	4	3
Ignition timing b.t.d.c. ...		39° or $\frac{1}{2}$ "		39° or $\frac{1}{2}$ "	39° or $\frac{1}{2}$ "
Brake diameter and width (inches)		7 \times $\frac{7}{8}$		7 \times $\frac{7}{8}$	7 \times $\frac{7}{8}$
Tyre sizes Front (inches) ...		3.25 \times 19		3.25 \times 19	2.75 \times 21
Rear (inches) ...	3.25 \times 19	3.50 \times 19		3.50 \times 19	4.00 \times 19
Chain sizes: Dynamo and Magneto (pitch \times width inch)		$\frac{3}{8}$ \times 0.225		—	$\frac{3}{8}$ \times 0.225
Primary ..		$\frac{1}{2}$ \times 0.305		$\frac{1}{2}$ \times 0.305	$\frac{1}{2}$ \times 0.305
Rear ..		$\frac{3}{8}$ \times 0.380		$\frac{3}{8}$ \times 0.380	$\frac{3}{8}$ \times 0.380
Gear ratios. Top—3rd—2nd—1st ...	5.8—7.6—9.9—15.4	5.0—6.5—8.5—13.3	5.25—6.9—8.9—13.9	5.25—6.9—8.9—13.9	6.6—10.3—16.0—21.0
Petrol consumption m.p.g. ...	85 at 40 m.p.h.	80 at 40 m.p.h.	75 at 40 m.p.h.	72 at 40 m.p.h.	—
Ground clearance (inches) ...		5 $\frac{1}{2}$		5 $\frac{1}{2}$	6 $\frac{1}{2}$
Overall height ...		41 $\frac{1}{2}$		41 $\frac{1}{2}$	43
length (inches) ...		86 $\frac{1}{4}$		86 $\frac{1}{4}$	83
width (inches) ...		28		28	28
Seat height (inches) ...		31 $\frac{1}{2}$		31 $\frac{1}{2}$	32 $\frac{1}{2}$
Wheelbase (inches) ...		55 $\frac{1}{4}$		55 $\frac{1}{4}$	54
Weight (lbs.) ...	375	387	394	396	320



Specification

SINGLE CYLINDER ENGINES:

347 c.c. capacity (69 mm. bore \times 93 mm. stroke).
498 c.c. capacity (82.5 mm. bore \times 93 mm. stroke).

Except for the cylinder bore dimensions both engines are identical in design and have a single-port, die-cast aluminium-alloy cylinder head, with cast-in valve seats, and a deeply finned cast iron cylinder barrel. The overhead valves are push rod operated and the whole of the valve operating gear is fully enclosed and positively lubricated. Racing-type hairpin valve springs are used.

The crankshaft assembly comprises individually balanced flywheels, a high-tensile steel, forged connecting rod, two-piece crankpin and a caged three-row roller big-end bearing. It is supported on three bearings, two ball races on the driving side and a plain bronze bush on the timing side.

Mechanical noise is reduced by the use of low-clearance wire-wound pistons which carry three rings, two narrow compression rings, the top one is chromium plated, and an improved oil-scraper ring.

A dry-sump lubrication system is employed and the oil is circulated through the engine and returned to the oil tank by a double-acting reciprocating plunger pump. There are direct oil feeds to the big-end bearing and the overhead valve gear. A magnetic filter, easily detached for cleaning, prevents foreign matter from circulating with the oil.

TWIN CYLINDER ENGINES:

498 c.c. capacity (66 mm. bore \times 72.8 stroke).
592 c.c. capacity (72 mm. bore \times 72.8 stroke).

Apart from the larger bore dimension of the 600 c.c. engine there are no differences in design.

Separate die-cast, light-alloy cylinder heads and cast-iron cylinder barrels are fitted, the crankshaft is in one piece and supported on three bearings, and the pistons are wire-wound to reduce running clearances.

Caged roller bearings support the driving and the timing sides of the crankshaft and a plain Vandervell bearing is used at the centre. This centre bearing is carried by an aluminium-alloy plate which is spigoted into and bolted to the die-cast aluminium crankcase.

The immensely strong connecting rods are forged from high-duty aluminium alloy and are fitted with plain Vandervell big-end bearings.

Three rings are fitted to each piston, two narrow compression rings and an improved slotted oil-control ring. The top compression ring is chromium plated.

Twin camshafts, gear driven, lie across the crankcase fore and aft of the cylinder barrels, and operate the overhead valves through short, single-arm cam followers, Duralumin push rods and forged rockers. The latter are mounted on eccentric spindles to facilitate the adjustment of clearance.

Two separate and independently driven gear pumps operate the dry-sump lubrication system. The feed pump forces oil to the centre and big-end bearings, and the overhead valve gear. The second pump returns the oil from the sump to the tank.

Incorporated in the engine are magnetic and fabric filters, both of which are easily removed for cleaning.

CARBURETTOR

Amal Monobloc of the latest design. The throttle control is by twist grip and the air control by lever. A pilot air adjusting screw is provided, for slow running.

IGNITION

KLG FE80, 14 mm. plugs and Lucas magnetos are fitted to all standard road models.

The twin cylinder models have a gear driven magneto and a manually operated ignition control.

A chain driven rotating magnet magneto with automatic advance and retard mechanism is fitted to the single cylinder models.

GEARBOX AND CLUTCH

Heavyweight four-speed gearbox with kick starter, and foot operated, positive stop gear change mechanism. The multi-plate dry clutch is hand controlled from the handlebar.

TRANSMISSION

Primary. Roller chain enclosed within an oil bath chain case. An inspection cover is fitted over the clutch.

Final. Roller chain covered by a deep section guard extending over the entire length of the top run.

FRAME

Duplex cradle type of brazed construction. Lugs are provided for the attachment of a sidecar on the right- or left-hand side of the machine, and for pillion footrests. The rear wheel is carried on a swinging fork pivoted on a substantial bearing.

Specification

SUSPENSION

Full *Teledraulic* suspension is fitted to all models. The front forks are of A.I.S design and incorporate hydraulic damping. The rear suspension is provided by two oil damped *Teledraulic* units which provide exceptional comfort under all conditions.

WHEELS

The rear wheel is quickly detachable and can be removed without disturbing the brake and driving sprocket. Both wheels have 19-inch rims, light-alloy full-width hubs and straight spokes.

MUDGUARDS

Manufactured from high grade steel and of domed section. The rear guard has side valances and a detachable tail piece.

TYRES

Front Dunlop ribbed.

Rear Dunlop studded.

For sizes see Data Sheet on page 9.

BRAKES

7-inch internal expanding front and rear with finger and shim adjustment.

TANKS

Steel with welded seams. The capacity of the petrol tank is $3\frac{3}{4}$ Imperial Gallons and that of the oil tank 5 pints.

FOOTRESTS

Adjustable and rubber covered. Provision is made for the attachment of pillion footrests.

TWINSEAT

Dunlopillo covered with black Vynide and of improved design.

HANDLEBARS

Of $\frac{7}{8}$ -inch diameter, chromium plated and rigidly held in a substantial clip. The angle is adjustable.

STANDS

Central and prop stands are provided. Both are of robust design and easily manipulated.

SILENCER

High efficiency and of tubular design, heavily chromium plated.

TOOLBOX

One large box is mounted on the left hand side of the machine. It is made integral with the battery carrier and matches the oil tank to give a greatly improved appearance.

ELECTRICAL EQUIPMENT

Standard Road Models.

Lamps

7-inch headlamp and streamlined twin pilot lights. The rear lamp is a plastic moulding incorporating a brilliant red reflector and a red and a white window.

The speedometer is illuminated and mounted in the headlamp shell.

A single pilot light incorporated in the headlamp is available to meet the requirements of Holland, Denmark, Belgium and other countries.

DYNAMOS

Twin cylinder models have a 42-watt and the single cylinder models a 35-watt dynamo. All models have a rubber mounted separate voltage control unit, electric horn and a 6-volt battery. The horn is concealed beneath the Twinseat and the battery mounted on a carrier which is shrouded by a steel pressing incorporated with the toolbox.

EQUIPMENT

Illuminated speedometer, ammeter, red reflector, tyre pump, grease gun, toolkit and comprehensive instruction book.

OPTIONAL EXTRA EQUIPMENT

Stop light, folding pillion footrests, air cleaner, luggage panniers, and luggage carrier.

FINISH

Three coats of high quality black enamel, stove finished on Bonderized surface. Petrol tank hand lined. Wheel rims chromium plated and enamelled centres. Controls, filler caps, etc., heavily chromium plated. Aluminium hubs, fork sliders, etc., are highly polished. The twin cylinder models have a heavily chromium plated petrol tank.

TRIALS MODEL

For details of specification differing from above please turn to page 6.

RACING MODEL

A brief specification is given on page 3.

Guarantee

NOTICE

We do not appoint agents for the sale on our behalf of our motorcycles or other goods, but we assign to Motorcycle Dealers areas in which we supply to such Dealers exclusively for re-sale in such areas. No such Dealer is authorized to transact any business, give any warranty, make any representation or incur any liability on our behalf.

GUARANTEE

We give the following guarantee with our motorcycles, motorcycle combinations and sidecars, which is given in place of any implied conditions, warranties or liabilities whatsoever, statutory or otherwise, all such implied conditions, warranties and liabilities being in all cases excluded. Any statement, description, condition or representation contained in any catalogue, advertisement, leaflet or other publication shall not be construed as enlarging, varying or overriding this guarantee. In the case of machines (a) which have been used for 'hiring-out' purposes, or (b) any motorcycle and/or sidecar used for any dirt track, cinder track or grass track racing or competitions (or any competition of any kind within an enclosure for which a charge is made for admission to take part in or view the competition), or (c) machines from which the trade mark, name or manufacturing number has been removed, no guarantee, condition or warranty of any kind is given or is to be implied.

We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and be in force for six months only from date of purchase, and damages for which we make ourselves responsible under this guarantee are limited to the free supply of a

new part in exchange for the part of the motorcycle, motorcycle combination or sidecar which may have proved defective. We do not undertake to replace or refix or bear the cost of replacing or refixing such new parts in the motorcycle, motorcycle combination or sidecar. We undertake subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As motorcycles, motorcycle combinations and sidecars are easily liable to derangement by neglect, or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect. The term 'misuse' shall include amongst others the following acts:

1. The attaching of a sidecar to a motorcycle in such a manner as to cause damage or calculated to render the latter unsafe when ridden.
2. The use of a motorcycle or of a motorcycle and sidecar combined, when carrying more persons or a greater weight than that for which the machine was designed by the manufacturers.
3. The attaching of a sidecar to a motorcycle by any form of attachment not provided, supplied or approved by us, or to a motorcycle which is not designed for such use.

Any motorcycle, motorcycle combination or sidecar sent to us to be plated, enamelled or repaired will be repaired upon the following conditions, i.e. we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, such guarantee to extend and be in force for three months only from the time such work shall have been executed or until the expiration of the six months above referred to, and this guarantee is in lieu and in exclusion of any common law or statute, warranty or condition, and the damages recoverable are limited to the cost of any further

work which may be necessary to amend and make good the work found to be defective.

CONDITIONS OF GUARANTEE

If a defective part should be found in our motorcycles, motorcycle combinations or sidecars, or in any part supplied by way of exchange before referred to, it must be sent to us CARRIAGE PAID, and accompanied by an intimation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the date of the purchase, or the date when the alleged defective part was exchanged, as the case may be.

Failing compliance with the above, such articles will lie here AT THE RISK OF THE OWNER, and this guarantee and any implied guarantee, warranty or condition shall not be enforceable. We do not guarantee specialities such as tyres, saddles, chains, electrical equipment, lamps, etc., or any component parts supplied to the order of the purchaser differing from standard specification, supplied with our motorcycles, motorcycle combinations, sidecars or otherwise.

THE A-J-S FREE SERVICE SCHEME

It is strongly recommended that owners of new A-J-S motorcycles should avail themselves of the free Service Scheme operated by all home Dealers, full details of which are given on the card supplied with each machine.

NOTICE

All prices and specifications are subject to alteration without notice and all motorcycles and equipment are sold subject to the limited guarantee printed herein.

