

RELIABLE is the word which sticks resolutely in my mind after reading through the comments of our 50-odd reporters. Time and time again this word has projected itself from the page; in every case it is allied with a touching story of faithful service that has certainly not been equalled in any previous Riders' Report.

"These bangers, with a design heritage dating back to well before the war, are old-fashioned by today's high-revving standards. But they represent a stage in British motor-cycle development and it will be a very sad day when they are no longer produced in their present form." These sentiments, from Charles Mitchell of Bristol, convey the feeling of genuine affection in which all owners seem to hold their AMC singles.

I must confess that I am more than a little touched in this respect. After owning two of these machines—my

second was an ancient 1949 five-hundred—I couldn't help shedding a little tear at the thought that these eminently pleasant, though of late rather unsuccessful, motor cycles are now reaching the end of their production life.

This is confirmed by 20-year-old Tom Waterer of Surrey: "An excellent machine—but made for a now virtually dead market."

It is hard to say why this is so. You will see from this report that the AJS and Matchless big singles have everything to recommend them—except, perhaps, out-and-out go-ability of the modern kind.

The reporters are all experienced motor cyclists, with about seven years on wheels. Average age is 25; between them they have covered over 700,000 miles on the bikes; that works out at about 15,000 miles each.

They are a special brand of enthusiast. They stick to the old bikes because of the utter reliability and ease of maintenance. These AMC jobs are made for

riding—and they don't object too strongly if they are a mite neglected.

Many of our readers certainly don't stick at owning one. Some have a fleet, in varying stages of repair. Perhaps they use the older specimens for spares (see the paragraph on service). Adrian Baldwin, a 19-year-old Bristol student, has owned four and still prides himself on his stable of three.

As he says: "The AMC singles are the most underrated motor cycles on the market. It is a wicked shame that they are not more popular, for here are excellent all-round machines—not soggy big bangers as most people think. They are all good motor cycles should be—fast, economical, reliable, safe and predictable.

Perhaps they are too predictable for modern enthusiasts? There is so little discrepancy in accounts—and remember we're dealing with bikes up to ten years old—that it appears to be an unexciting business to own one. You know what's going to happen and you get none of the surprises which may come your way with more modern designs.

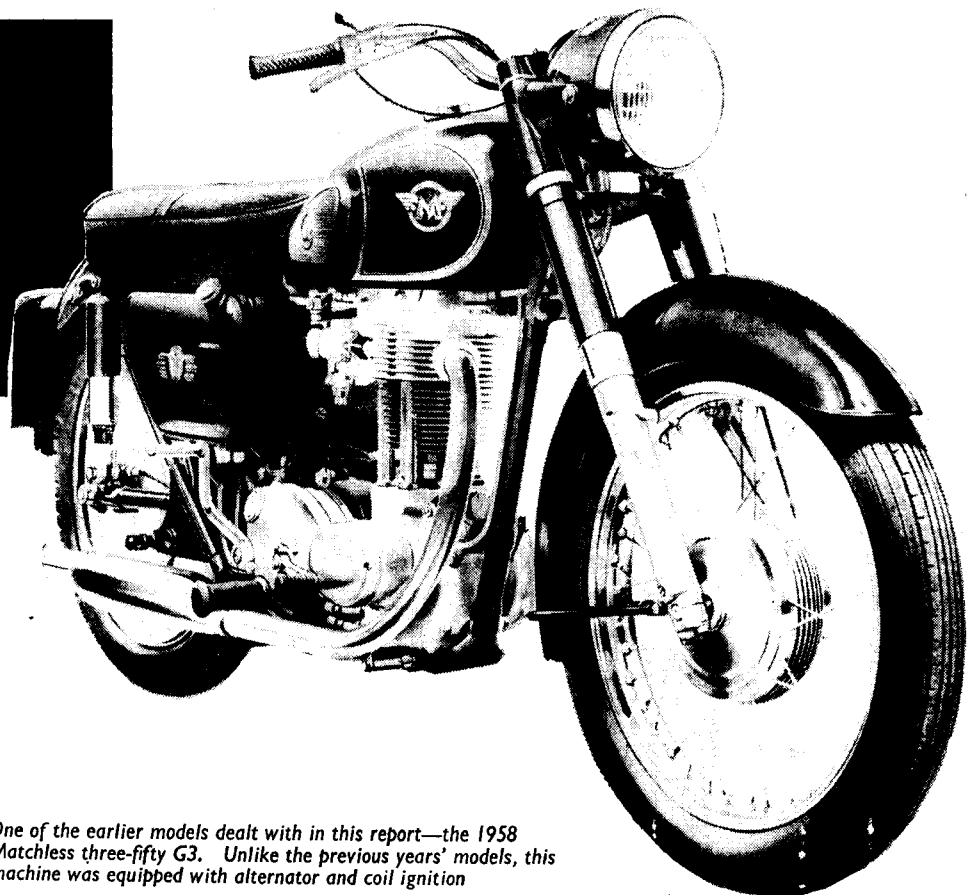
AJS and MATCHLESS BIG SINGLES—1956 to 1966

**RIDERS'
REPORT**
number
seventeen
COLLATED BY
MIKE EVANS

Performance

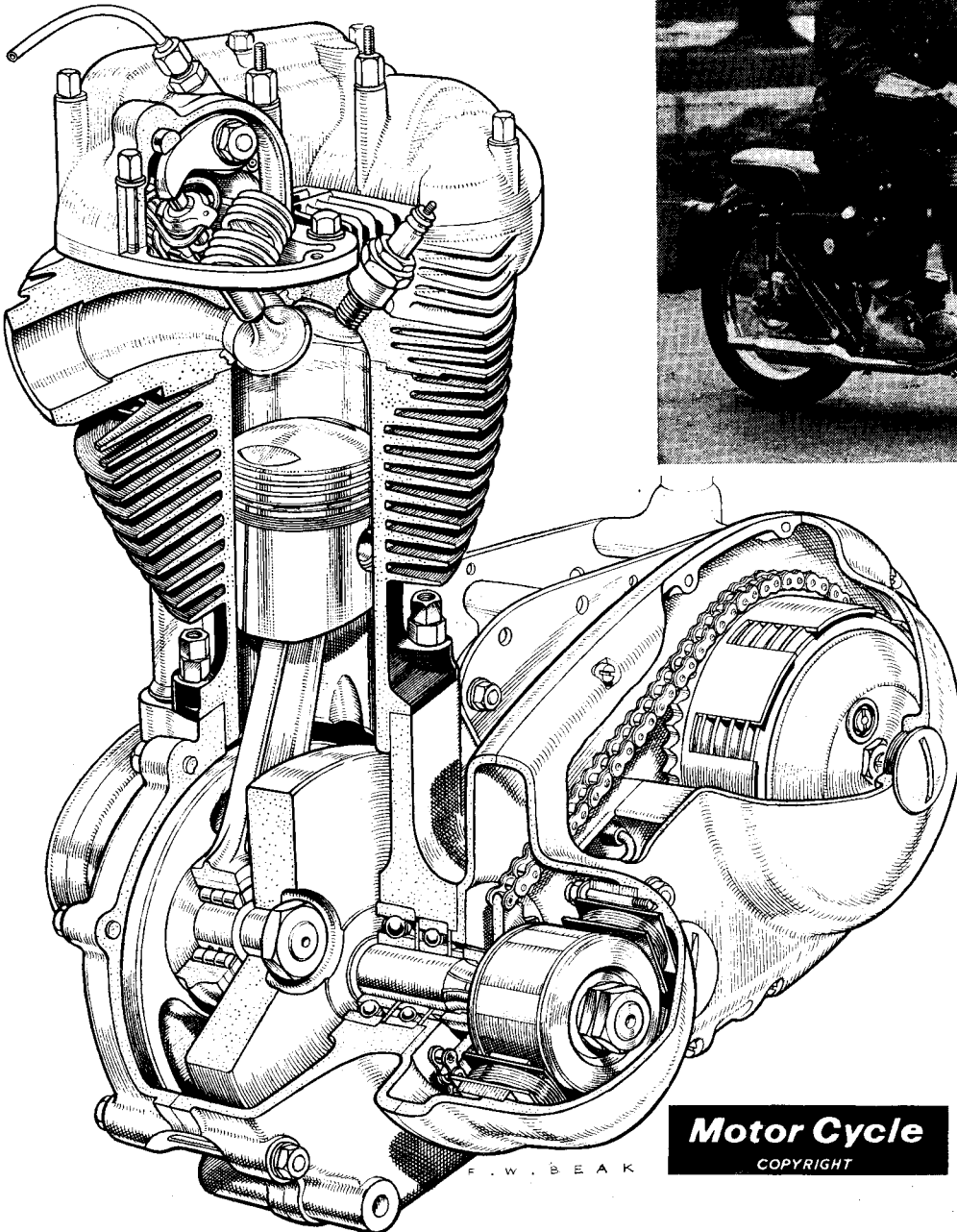
REPORTERS' average maximum speeds work out to 79 mph for the three-fifties and 84 mph for the five-hundreds. By modern standards this is quite paltry—and no doubt accounts to a large degree for the failing popularity of these 16s and 18s, and G3s and G80s.

However, as Bob Todd, 20, points out, the engine has a very wide power band. Whether revving hard through the gears or plodding along at



One of the earlier models dealt with in this report—the 1958 Matchless three-fifty G3. Unlike the previous years' models, this machine was equipped with alternator and coil ignition

Below: This cutaway drawing of the 498 cc engine shows it in its 1958 guise—the AC generator installation can be clearly seen. A feature of these extremely simple power units is the hairpin valve springs, also obvious from the drawing. Right: Peter Fraser samples our 1962 road-test 498 cc Ajay



Motor Cycle
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30 mph in top, the machine offers no protest.

He's a good judge since he regularly competes in trials and scrambles—though not on the same bike.

Maximum cruising speed appears to be about 70 mph on the smaller models, with another 5 mph or so available from the bigger bangers.

The characteristic thump of a big single is obvious to the rider, particularly so at slow speeds; only after about 60 mph does vibration as such become noticeable.

According to the few repor-

ters who make any mention of it, it gets steadily worse as the speed builds up. On the other hand, many don't consider vibration a point worth commenting on.

Acceleration, of course, is nothing to write to the National Sprint Association about. Yet it is adequate—and surprises many riders of more sporty machinery.

Oil-tightness? A few moans here. Says Bob Todd: "Oil finds its way from the pushrod tubes, the alloy chaincase and, to a small extent, from the rocker box."

for most single-cylinder bigsters, and the AMC versions are no different.

American reader Jimmy Christodoulou of San Diego wrote to complain of starting on his 1966 G80 Matchless. So I gave him the old rigmarole of on with petrol, lightly flood, ease over compression with valve lifter and then one almighty swinging kick.

Back came his reply the following week: "My Matchless has kicked off just perfectly."

Just shows, doesn't it? Really, these bikes are simplicity itself to start. They aren't even temperamental. As long as you use the right procedure she'll start. If you don't you can prod for hours!

Handling

THESE models have always been regarded as good handlers. Latest developments—the Norton fork, for instance—will have helped, if anything.

Moreover, since the introduction of Girling suspension units in the mid-fifties, there have been very few complaints about the rear end.

The earlier, "jam-pot" AMC rear suspension units were not so good.

There are a few conflicting reports, nonetheless. While Peter Jopson can "scrape the stand with no fears since it handles like a Norton," Dutch enthusiast Marcelis van Dongen, age 20, reports that handling is good—but not excellent "because in fast corners it

The earlier pressed-steel primary chaincase was, in the opinion of most, an abortion. Tom Waterer tells us that it can be sealed successfully by using a sandwich of outer cover, rubber band and inner cover. The metal band, he says, can be left off.

Starting

OH YES! For those as 'as got the knack, easy. For those as 'asn't, Pygmalion difficult. More than anything else, it's a question of knack. This goes

Technicalities

BOTH the three-fifty and five-hundred models have essentially simple overhead-valve, single-cylinder engines. The capacity of the smaller unit is 348 cc (74 x 81mm) and that of the larger, 498 cc (82.5 x 93mm).

For 1962 the three-fifty engines were redesigned with the shorter, 81mm stroke; previously the capacity had been 347 cc, with a bore and stroke of 69 x 93mm.

Basically, however, both the five-hundred and three-fifty models have retained a similar specification over the ten years covered by this report. The major changes in this time have been the introduction of the duplex frame for 1961 and the change from the old-fashioned magneto-cum-dynamo ignition and lighting system to ac generator and coil ignition in 1958.

While the electrical modifications certainly made for a cleaner engine unit, it is apparent from readers' opinions that the old system is still preferred. Dry-sump lubrication with an external four-pint oil tank follows orthodox practice.

Compression ratio of the later models is 8.5 to 1 (348 cc) and 7.3 to 1 (498 cc). The crankshaft is supported in plain and ball bearings, while a roller big-end bearing is employed.

The AMC four-speed gear box is mounted separately from the engine; drive to the gear box is by a single-row chain running in an oil bath. Chain tension is adjusted by moving the gear box longitudinally in its mounting brackets.

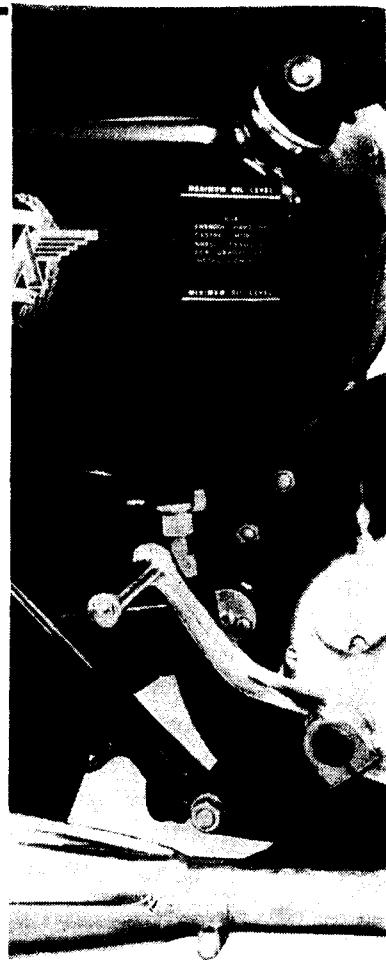
Specimen gear ratios, as quoted in our 1962 road tests, are 14.85, 9.85, 7.08 and 5.8 to 1 for the three-fifty, and 12.86, 8.53, 6.13 and 5.02 to 1 for the five-hundred.

Suspension is by Girling spring-and-hydraulic units controlling the pivoted fork at the rear, and by AMC Teledraulic front fork. On the latest models this has been superseded by the Norton Roadholder fork.

Models of both capacities are identical in other respects—although the three-fifty version has 3.25 x 19in tyres while its bigger sister sports a larger, 3.50in-section rear cover.

Throughout the long history of these singles, they have retained the same basic model designations.

In the AJS range the three-fifty is the Model 16 and the five-hundred the Model 18. Equivalent models in the identical Matchless range are the G3 and G80. Manufacturers are Matchless Motor Cycles, Ltd, Plumstead Road, London, SE18.



waggles its tail, often very much."

Final word to Ian Hamilton of East Kilbride: "Handling and steering are fine."

Braking

"AS near perfection as possible," reports enthusiastic Steve Bessant. Perhaps he is a little too enthusiastic—yet there are very few complaints about the brakes.

No need for detail here; there is little doubt that the brakes are to be considered excellent.

Consumption

NO surprises here. A big single is normally economical. Peter Jopson, a decorator from Maidstone, averages 60 mpg on his 1966 five-hundred.

A three-fifty owner, 22-year-old Anthony Bennett of Westgate-on-Sea, says that he frequently gets 80 to 85 mpg on long runs. If the speed is kept down to 30 or 35 mph, the bike will return over 100 mpg.

Averages? For the five-hundred, 61 mpg; for the three-fifty, 72 mpg.

Transmission

"FIRST class apart from one small point—the gear lever return spring lasts only about six months. Fitting a replacement is not a difficult or expensive job but the spring usually breaks at a most inconvenient time."

Roger Bradshaw's experience is typical. Most reporters complain of this, although Roger does seem to suffer more frequently than most.

Otherwise, as he says, everything is okay. The gear box is excellent and the clutch is trouble-free.

Electrics

AS usual, this is one of the most difficult categories to collate. Words like disgraceful are bandied gaily around, while other readers enthuse in no uncertain terms.

For the only clear picture it

is necessary to turn to the table.

You will see that lighting gets an average mark of 60 per cent, while the electrics in general are only slightly better at 65 per cent. The horn, as usual, is beneath contempt.

It appears, therefore, that reporters are barely satisfied with the performance and reliability of the electrical systems.

What does emerge clearly, however, is the indisputable preference for the old set up of dynamo and magneto, superseded in 1958 by the "modern" coil ignition.

Detail Finish

"WORKMANSHIP is in keeping with the finish. There seems nothing on the bike that is skimped or can be classed as insubstantial." That view comes from one of our many Australian readers, John Bryant, of Melbourne.

English owners are no less generous with their praise:

"Although the bike is seven years old," writes 19-year-old

Tony Trevail, of Perranporth, "the paintwork and chrome are still smart. When it is cleaned up, the bike is very handsome."

Alan Richardson, an engineering student from Beverley, Yorkshire, confirms this view: "The finish is one of the outstanding features."

"The seven-year-old paintwork is still in fine condition—much in contrast to my previous mounts."

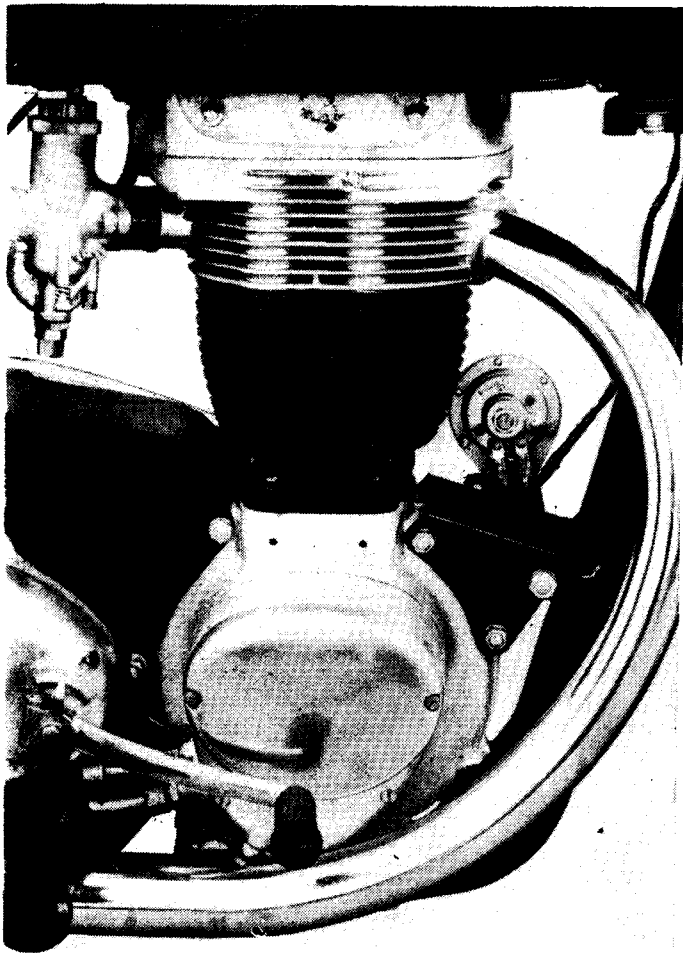
Riding Comfort

SINCE these bikes are certainly not cut-and-thrust sportsters, it isn't surprising that they are comfortable.

"My two Matchless can be ridden all day without discomfort," reports Sidney Singfield, 18, of Liverpool.

Roger Bradshaw, who is 6ft 4in tall, found the riding position a little too cramped, but solved the problem by turning the original handlebar upside down.

On the other hand, fellow six-foot-fourer Mick Seaby, of Wimbledon, considers the



Above: This power unit, in a 1966 three-fifty, differs only in small details from those of earlier machines. Owners praise it for its accessibility, such as the way in which the clutch cable can be replaced in minutes after removing the small inspection cap on the gear-box cover.

standard position to be quite comfortable.

One of the charms of the "traditional" design is the way in which such things as the riding position can be readily altered to suit an individual rider.

Reliability

"IN 18 years of motor cycling I have owned three AMC singles—two three-fifties and one five-hundred.

The 1952 498 cc Matchless gave me 108,000 miles of faithful service in its ten years on the road. My 1957 three-fifty (bought with a genuine 21,000 on the clock in 1962) has covered 55,000 miles, although it is now ready for an overhaul."

That is, perhaps, the most impressive of the many recommendations from readers. It comes from 34-year-old Peter Wallace of Manchester.

Peter's experience is, however, not far above average. Norman Crate, 49, of New Ferry, Cheshire, has clocked 27,000 miles on his 1961 Matchless G3 and he is "still waiting for the performance to drop off and show the need for a decoke."

It seems that these old bangers would give a few pointers to some latter-day twins.

Here are a few more words of praise—you won't find many voices raised in disagreement:

"In the seven years I have owned it, my 1957 G3 has proved thoroughly sound. It is far and away the most reliable vehicle I have possessed." (John Allison, Dudley, Worcs.)

"Both my 1957 three-fifty and 1956 five-hundred are old bangers. The one cost £20 and the other only £1! Yet both run well and reliably." (David Jowers, North Harrow, Middlesex.)

"The bike never let me down in 26,000 miles. The only replacements were one rear chain, one front tyre and a headlight unit." (John Bryant, Australia.)

"These bikes are the most reliable machines made in the world since the war." (Paul Ellis, Wellingborough, Northants.)

'Nuff said? There is little doubt that, on reliability, the AMC singles come out of this riders' report as good as, if not better than, any other machine so far reported on.

Service

AFTER previous AMC Riders' Reports I was expecting broadsides from all directions on the spares situation. Surprisingly enough, however, the picture isn't quite so bad as it has previously appeared.

Perhaps this is because many of the owners of these machines are able to ferret around and get secondhand spares.

The bike has been in production so long that most dealers have reasonable stocks and there are lots of second-hand bits available.

Nevertheless, there is sufficient criticism of the Plumstead spares set-up to warrant a paltry 56 per cent mark. Dealers come out slightly worse, at 54 per cent.

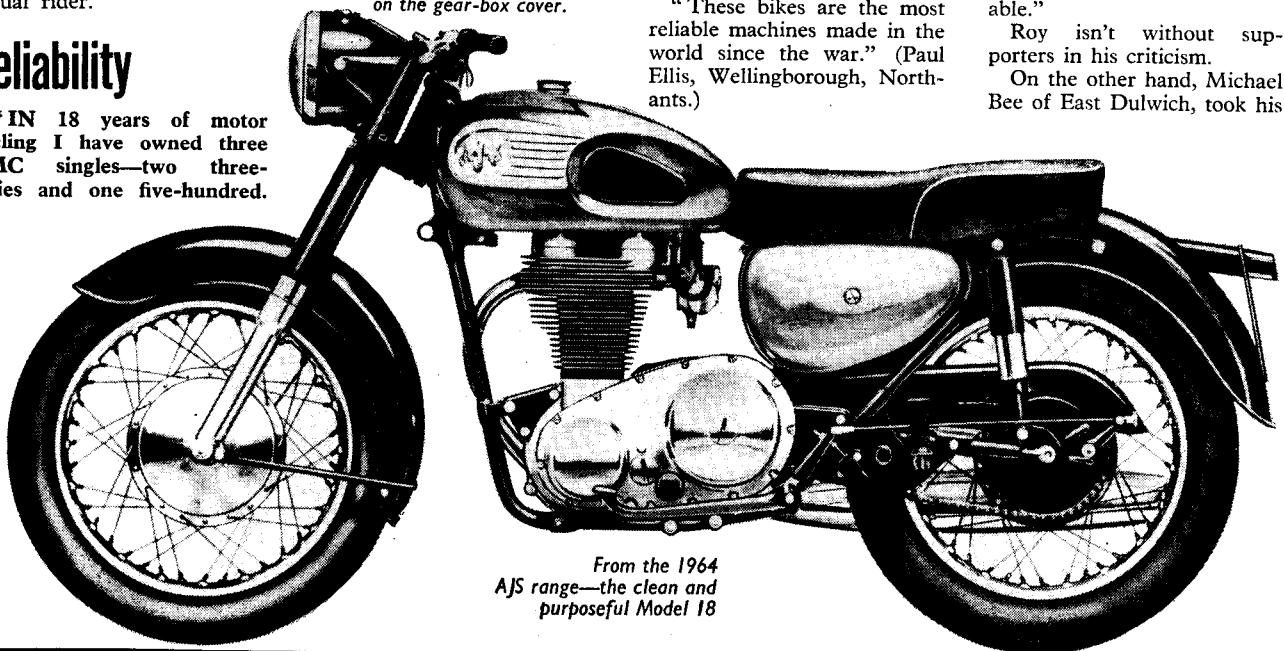
Service at the factory is reported to be efficient. But it is incredibly long-winded, according to Roy Poynting of Salisbury.

"Although I find spares relatively easy to come by, the factory service department does not warrant similar praise.

"In a rash moment I decided to return my crankshaft to Woolwich to have the big-end renewed. It took two months and three letters to get it back. The excuse, as usual, was shortage of fitters. However, the charge was reasonable."

Roy isn't without supporters in his criticism.

On the other hand, Michael Bee of East Dulwich, took his



From the 1964 AJS range—the clean and purposeful Model 18

cylinder head to the service department and they fitted a new valve guide and recut the valve seats in 45 minutes. And the charge was only 10s!

Accessibility

"PERHAPS the designer of this machine had actually owned a bike," jokes Tom Waterer. In this he is probably nearer the truth than he suspects.

The basic layout of the AJS and Matchless singles was laid down so many years ago that the designer probably did use one of his creations for his day-to-day transport.

You could bet, then, that if he spent, say, three hours changing a clutch cable while on his way to the drawing board one morning, he jolly soon designed a simpler way of doing it.

There is ample evidence from readers' letters to prove that these models are very accessible.

The engine is particularly easy to work on and there are no snags.

That traditional AMC fuel-tank fixing arrangement (you know, the four bolts that strip their threads, the myriad rubber washers and metal washers and the bits of connecting wire) are the cause of frequent frayed tempers. Yet this is the only point for criticism.

Overall View

YOU want either out-and-out speed or utmost reliability. Anyone with long experience of motor cycling will tell you that you can very seldom have both. You can get a combination—a happy medium, if you like—but for utter reliability it would appear that you have to settle for sedate performance.

That is, of course, if you call 70 to 80 mph sedate. There is a good cause, in these days of the 70-mph limit, for having a bike like the AJS or Matchless single.

But apart from this, there will always be the select band of riders who go for reliability and ease of maintenance. That is why they will stick to their "old-fashioned" singles as long as the MoT test station will continue to accept them as roadworthy.

As Andrew Merchant of Upminster says, it is a pity that demand for this type of machine has virtually ceased.

"It offers such a pleasant



The famous heritage of the AMC singles is well illustrated by this 1941 shot of WD three-fifty Matchless in a wartime inter-services exercise. Note the girder front fork. In that year the Teledraulic fork made its appearance; it was the first of the modern generation of telescopic front forks

mode of travel. Perhaps this opinion will condemn it in the eyes of younger riders, but I have come to regard my Model 16 as a permanency in my stable.

"Although no great demands are made on it, it has shown durability and reliability. Long live the AMC singles."

Adds John Allison, a teacher: "Ideal for someone like me who, because of many outside interests, can afford time for only minimum maintenance."

A secondhand Ajay or Matchbox is an extremely good bet. For one thing, it can be picked up fairly cheaply—and models have changed little over the years. Since the engine is easy and cheap to work on, it doesn't really matter if, say, a new big-end or main bearing is needed.

Further, either three-fifty or five-hundred is ideal as the in-between stage for the comparatively inexperienced rider—after the two-fifty and before the six-fifty.

He can learn a lot from stripping down this basic, single-cylinder four-stroke, which isn't half so daunting as the modern vertical twin. What's more, provided he takes care in reassembly, he is almost guaranteed faithful service for many miles.

That is the view of almost all reporters.

Most of our road tests (and some of the Riders' Reports) deal with new machines. They are bikes in their first flush of infancy.

As a type, the bikes in this report are different. They have had a long and distinguished history—including faithful war service—and many are now reaching the end of their useful life.

The AMC big singles are the last of the many—Spitfires among F111s. But, like the Spitfire, they will leave behind them the sort of memory that dies very hard in the minds of those who knew them.

WHAT NEXT ?

■ Twin time — Triumph Tiger 90 to be precise. If you own one of these popular three-fifties let us have your report right away.

Address your letters to Rider' Reports, Motor Cycle, Dorset House, Stamford Street, London, SE1.

ROAD TESTS	AJS 498 cc Model 18 March 1962	Matchless 348 cc G3 May 1962	Matchless 348 cc G3/Garrard GP July 1962
	HIGHEST ONE-WAY SPEED	87 mph	78 mph
MEAN MAXIMUM SPEED	82 mph	77 mph	60 mph
STANDING QUARTER-MILE			
(speed)	68 mph	67 mph	52 mph
(time)	18.4s	19.6s	22.8s
FUEL CONSUMPTION			
(at 30 mph)	84 mpg	93 mpg	74 mpg
(at 40 mph)	72 mpg	88 mpg	68 mpg
(at 50 mph)	64 mpg	80 mpg	58 mpg
(at 60 mph)	52 mpg	67 mpg	—
BRAKING			
(from 30 mph to rest)	29½ft	30ft	36ft

PERCENTAGE VOTE

■ Readers were asked to complete a questionnaire in which they answered specific questions according to the formula good, middling or poor.

In calculating these figures we have allowed two points for good and one for middling. Poor got nothing.

The marks below are given as percentages of the total possible marks.

	350s	500s		350s	500s		350s	500s
Acceleration	66	61	Front			Quality of		
Flexibility	91	83	Suspension	84	83	Finish	84	84
Smoothness	72	89	Rear			Lighting	40	60
Starting	92	83	Suspension	79	56	Horn	25	25
Oil-tightness	55	50	Smoothness			Other		
Reliability	94	89	of Controls	86	86	Electrics	65	65
Clutch	77	78	Riding			Tool Kit	60	60
Gear Box	87	72	Position	85	85	Spares from		
Delivery			Brakes	81	81	Manufacturer	56	56
Tune*	83	83	Mudguarding	77	77	Spares from		
Accessibility	73	89	Workman-			Dealer	54	54
Handling	78	78	ship	87	78			

*Secondhand machines not taken into account.

OVERALL MARK. 74 (350s), 80 (500s)

GOOD BUY? For both models, 100 per cent said yes.

WOULD YOU BUY ANOTHER AMC MACHINE? 85 per cent of three-fifty owners and 89 per cent of five-hundred owners said yes.