



A motorcycle publication for the motorcyclist enthusiast.

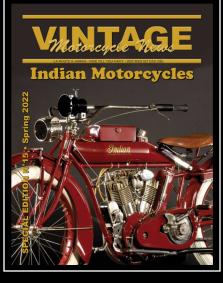
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COVER PAGE 1928 AJS 800cc SV by Nigel Lomas Notice

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NEXT EDITION

During the 1910s, Indian Motorcycle became the largest manufacturer of motorcycles in the world. The next edition is all about the iconic Indian Motorcycle and its style rooted in 120 year of history.



FROM THE EDITOR'S DESK



You would think that AJS would be one amongst a few names in the manufacturer's listing of Britain under the letter A. Wrong, I counted 103 brands ranging from 1856 to now. Many of those names are totally unknown from the avid motorcyclist I am. I was surprised to see so many of them.

The AJS brand in the vintage world of motorcycles take a soft spot in my heart. For some reasons, this brand brings lots of memories from my youth. Every week I was buying Moto Revue, a black and white magazine (no color in those days) on motorbikes. I was a teenager then, after school I would sit under a tree and read the exploits of the famous racers of the era, and learn all the specs of motorcycles I could never own. Nowadays, every time I have a chance, I take the time to stop and look at an AJS.

Again, this year was plagued with a fourth wave of the covid-19, making all rallies or events cancelled as usual. However, doctors are saying next year should look better because covid is on its way out... Many are like lions in cages, nowhere to go could drive people nuts, but there is hope... Hard to believe that this virus is going to slow down and allow us to resume our favorite passtime. The good thing about this newsletter is that I am still myself even after 2 years of not riding my bike. Working on it allow me to relax almost in the same way as when I was going for a ride.

Next year will be great because we will be covering the Indian. the Matchless and the Douglas. And like every year a Collector Series... about the Autoped. Very little has been said on the Autoped, probably because it did not sell that well and did not last very long. Nevertheless, it was still able to make a significant impact in its days and became also the first motorized scooter (have a look at page 109).

I thought it would be the last edition for this year, I was wrong. Surprise! You are getting an extra one. I received a lot more info and documents on the Neracar. I even learn the difference between the word Ner-A-Car and Neracar. It was important enough to create a revised edition of the original released from last year, giving you 2 editions for December.

Till next time... Ed.



AJS Lightweight Single Repair Do It Yourself by IFIXIT

www.ifixit.com/Device/AJS_Matchless_Lightweight_Single



AJS Lightweight fitting Boyer Bransden electronic ignition

The Wipac ignition system fitted to Lightweights can be improved with a bit of modern technology. While the standard system is OK when in perfect working order, the advance/retard mechanism is prone to wear, replacement points are expensive and the timing seems to flutter all over the place. This leads to erratic idle and poor high-speed performance. The solution is to fit an electronic ignition system that eliminates the points and mechanical advance/retard.

Boyer Bransden make a very neat electronic ignition system for classic motorcycles. This guide describes first how convert an AJS/Matchless Lightweight to 12V and then fit a Boyer Bransden ignition system.

<u>Assessment</u>

Difficulty	Moderate
Working Steps	13
Time required	4hours

<u>Tools needed</u>

- Flathead screwdriver
- Soldering iron
- 1/2" Ratchet socket Extension Set



AJS Lightweight Gearbox Overhaul

This guide will show you how to remove, dismantle and overhaul the gearbox from a 250cc AJS Model 14 / Matchless G2 or a 350cc AJS Model 8 / Matchless G5 motorcycle (all years).

You will need a decent set of tools and plenty of patience. Note that parts for Lightweight gearboxes can be very tricky to find. Although they were made in large numbers, there are lots of subtle variations that can make finding the correct part quite difficult. If you get stuck, remember that the Norton Lightweight shares some of the gearbox internals and these can be a useful source of parts.

Assessment

DifficultyModerateWorking Steps28Time required6hours

Tools needed

- Set of Whitworth spanners
- Set of Whitworth sockets
- Flathead Screwdriver
- AMC clutch extractor tool
- C-spanner
- 38mm deep socket
- Impact Driver



AJS Lightweight Gearbox Removal

This guide will show you how to remove the gearbox from a 250cc AJS Model 14 / Matchless G2 or a 350cc AJS Model 8 / Matchless G5 motorcycle (all years).

You will need a set of Whitworth spanners or sockets and a decent flat-bladed screwdriver.

Note that the bike featured in this guide has a few modifications from standard, so your bike may look a little different in places. The basic technique remains the same, regardless of which model of Lightweight you have.

Assessment

DifficultyNWorking Steps8Time required11

Moderate 8 1hour

Tools needed

- Set of Whitworth spanners
- Set of Whitworth sockets
- Flathead Screwdriver
- AMC clutch extractor tool



OVERHEAD VALVE A.J.S. AVAILABLE.

New 349 c.c. Model based on Famous T.T. Winning Type.

M ORE than once criticisms have been WI heard owing to the fact that the makers of the A.J.S have re-peatedly won the Tourist Trophy Race

with an overhead valve model which was not available on the open market.

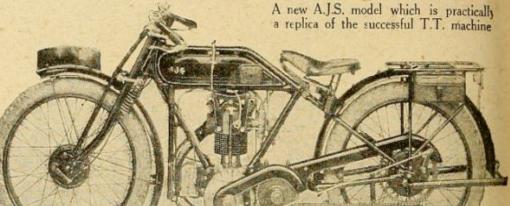
Nevertheless the manufacturers acted wisely, for they felt that until the experimental machines had been reduced to a form in which they were safe in the hands of the public it was better not to sell them broadcast. Now, however, the latest developments render the o.h.v. model as available as the popular side valve type.

At the forthcoming Olympia Show there will be staged a super sports model with an engine based on the T.T. A.J.S. machine. The overhead valve mechanism will be almost exactly similar, except for the fact that somewhat longer valve guides are employed so as to reduce wear at this vital point. These valves give a clear port opening equivalent to $1\frac{1}{16}$ in. and a lift of $\frac{5}{16}$ in. They are operated through hollow push rods with an independent return spring for the rocker gear. Recent modifications include an increased head cooling area with vertical fins arranged to lie in the same direction as the main air current. The detachable head is held down by a round section steel strap semi-circular in form. As might be expected, the head and cylinder joint are formed on the patented A.J.S. lines

Four-ringed aluminium piston.

Another innovation since the Tourist Trophy races takes the form of an aluminium piston, though the four very narrow rings above the gudgeon pin are retained. A hollow gudgeon pin is fixed in the piston bosses by means of a split pin, a bronze bush being fitted to the small end of the connecting rod; the connecting rod itself is a nickel chrome forging, heat treated and machined all over. The section of the road is extraordinarily light, being no more than I in. thick in the web; in spite of this, no trouble has ever been experienced with it. Two rows of thin. rollers are employed for the big end, an outer race being pressed into the rod. The bore and stroke remain as before, 74 × 81 mm. (349 c.c.).

Plain splash lubrication is relied upon for the bronze main bearings. On the driving side of the crankshaft a standard spring loaded cam type of shock ab-sorber is fitted, transmission following standard A.J.S. lines through a close ratio gear box, the ratios supplied being 5 to 1, 6.1 to 1, and 9.4 to 1.



For the benefit of sporting riders who desire to enter speed events and hillclimbs, the rear mudguard and carrier have been made in a quickly detachable form. There is also a stay from the

Top: Aluminium piston in the o.h.v. engine.

Nea! Left : external valve lifter cam.

Right : The roller bearing in the big end of the light connecting rod is carried in a pressed-in bush.

saddle tube to the rear of the cylinder head.

This overhead valve model does not replace the standard side-by-side valve machine. which will be listed as before, but with 650×65 mm. tyres, modified handle-bars and a much improved front mudguard which, in addition to being splayed at the rear, is formed with mudtrapping channels round the edge of the valances, and a shield at the front to prevent the ingress of air, which usually blows back mud spray on to the rider.

An aluminium piston is also fitted to this model.

Such features as the adjustable footrests, neat knee grips fixed direct to the tank, the spring loaded hand oil pump, are of course retained, and the machine is finished as well as ever.

Modifications to the 799 c.c. A.J.S. passenger outfit consist of aluminium pistons, a similar but enlarged type of mudguard to that employed on the standard 349 c.c. model, the fitting of Lucas Magdyno and lamps as standard, and the arrangement of the change speed lever and switchbox further forward on the tank, so that they clear the rider's knee with comfort.

1.234 e.e. INDIAN NEXT YEAR.

O many British motor cycle manufas turves are introducing new light weight models that this may be said

to be one of the chief tendencies for 1923. Not so in America, however, where an new lightweights are being considered. but instead even larger machines than the big twins so familiar on our roads.

For 1925 the Indian range will be in created by the introduction in this country of a new model of 1,354 s.s. which will be known as the "Super-Chief." While new to the Britad market, this model has been very popular in the U.S.A. and oversens Domonsom for the past year, and is intended for heavy duty and family sidecar work.

With a double sealed aidecar of the Princess type, the price is £167, lost if any hig twin soloist desires an engine over 1,300 c.c., it will be available with out the attachment at £137, with, like the sidecar outfit, full elactrical equipment and speedemeter.

Other Indian models retained for next year are; 905 s.s. Indian Chief, else trically squipped, £132; 990 c.s. Handand, spring frame, £207; electrically squipped, £223; 506 c.c. Scout, £36 15; ManxNorton.com



Going Slow, With Style: 1953 AJS 185

By Margie Siegal Photo by Nick Cedar

SOURCE: www.motorcycleclassics.com

1953 AJS 18S

- Engine: 498cc OHV air-cooled single, 82.3mm x 93mm bore and stroke, 6.26:1 compression ratio, 18-25hp @ 5,400rpm (figure varies by source)
- Top speed: 80-85mph (est.)
- Carburetion: Single Amal 89B
- Transmission: 4-speed, chain final drive
- Electrics: 6v, magneto ignition
- Frame/wheelbase: Single downtube steel cradle/57.25in (1,454mm)
- Suspension: Telescopic forks front, dual shocks rear
- Brakes: 7in (178mm) SLS drum front and rear
- Tires: 3.25 x 19in front and rear
- Seat height: 31in (787mm)
- Fuel capacity: 3.6gal U.S. (13.6ltr)
- Weight (dry): 386lb (175kg)
- MPG: 40-50mpg
- Price then/now: \$400(est.)/\$4,000-\$8,000

"Motorcycling is one of the most economical and pleasurable modes of transport. It is our sincere wish that every AJS owner should obtain, from his mount, the service, comfort and innumerable miles of low-cost travel that we have earnestly endeavored to build into it."

1953~

18

=> From the 1953 AJS maintenance manual

Once upon a time, there were people who liked slow motorcycles. People whose sole transportation was a motorcycle, and who expected their motorcycles to get them to work, rain or shine. They wanted a motorcycle that was reliable, sipped gas and could be repaired in the back yard. Speed was optional.

And while this type of motorcycling went out of fashion in the United States around World War I, it persisted in England and Europe until the early 1960s. Indeed, English motorcycle manufacturers prospered by building simple, economical bikes. The annual lineup may have featured a sport bike that grabbed headlines and won races, but the factory made most of its money building small, simple, slow bikes for the economy minded everyday rider. One of these English manufacturers was Associated Motor Cycles (AMC), a conglomerate that manufactured several different brands including Matchless and, after 1931, AJS motorcycles.

AJS motorcycles beginnings

AJS was started by the Stevens family, who produced their first complete motorcycle in 1909. The company prospered until the 1929 stock market crash, when financial reverses led to its sale to AMC in 1931. As the Thirties progressed, AJS and Matchless street machines began to look more and more alike, although the race departments remained separate. After World War II, the only mechanical difference between AJS and Matchless road bikes was that "Ajays" had the magneto in front of the engine, while Matchless machines had the mag in the rear.

During World War II, AMC built thousands of 347cc Matchless G3L singles for the Allies. Importantly, the G3L was the first English-built bike to feature telescopic forks. Shortly after Germany surrendered, AMC announced a civilian version of the G3L, the AJS Model 16. The sturdy pushrod overhead valve engine featured heavy cast iron flywheels for a lot of inertia and low-end torque. The connecting rod ran on three rows of caged roller bearings. Lubrication was dry sump, and ignition was by Lucas magneto and separate Lucas generator (*cue the "Prince of Darkness" jokes*). The four-speed gearbox was made by Burman, an independent firm that made gearboxes for several different English motorcycles.

Despite its reputation for reliability, the Model 16 engine had some quirks. The timing side shaft was not keyed to the flywheel but instead used a taper fit and nut; service manuals recommended that bottom-end rebuilders use a special jig to line everything up. The sheet metal primary case cover was determined to leak, despite the best efforts on the part of loyal owners, and the gearbox return spring broke on a regular basis.

Enter the AJS Model 18

In 1946, a big brother to the Model 16 joined the AJS lineup. The 498cc Model 18 had a bore and stroke of 82.3mm x 95mm. It weighed 349 pounds and, like many machines of its era, had a rigid rear end. It was reliable, easy to work on and, with a compression ratio of 5.9:1, would run on low octane "Pool" gasoline, the only gas available in England at the time.

Long-stroke singles like the Model 18 were something of a mainstay for the British motorcycle industry.

Nicknamed Thumpers or Bangers and sought out as basic transportation, they were also enjoyed by enthusiasts for what they were; slow, good handling, torquey beasts of burden, excellent for a quiet ride in the country. Following World War II, the English government was anxious to retire its massive war debt, and pushed manufacturers to expand their markets and export as much as possible. As a result, British motorcycles started trickling into the U.S. British bikes started to get a firm foothold in the U.S., and in November 1949 the Indian Motocycle Company, as a condition of a \$1.5 million loan from an English firm named Brockhouse, agreed to use its dealer network to sell a variety of English motorcycles, including AJS.

Yet AJS heavyweight singles were not very popular in the U.S. as most American riders were interested in fast road bikes or nimble enduro bikes, an increasingly popular category. The main market for the staid and simple Ajay singles continued to be English and British Commonwealth working people.

In 1949, rear suspension became available for an extra 20 pounds sterling. The next year, an all aluminum alloy engine appeared for offroad competition versions of the single, while the roadsters enjoyed an aluminum head with iron valve seat inserts. Distinctive, fat rear shocks known as "Jampots" appeared in 1951, resulting in the slender rear shocks used on earlier bikes being referred to as "Candlesticks."

Although England had two weekly motorcycle magazines, there are no contemporary road tests of the Model 18, even though it was very popular in its home market. Why? According to British motorcycle journalist Bob Currie, "Because some dastardly road-tester once wrote a mildly critical remark about an AJS (or maybe it was a Matchless) the top brass of the big AMC factory at Plumstead, south-east London, steadfastly refused to supply the motor cycling press with road test models throughout the 1950s."

Don Johnson's 1953 AJS 188

AMC may have had disdain for the motorcycle press, but it kept excellent records. The bike featured here is a 1953 Model 18S, S standing for optional rear suspension. AMC started building the 1953 models in the autumn of 1952, and this bike was completed at AMC's Plumstead works in December that year. According to AMC factory records, the test rider was a C. Challis, who passed this Model 18S, engine no. 22721, as roadworthy on Dec. 16, 1952. It was then crated up and shipped to P & R Williams, motorcycle dealers in Sydney, Australia, where it sold to an Aussie rider.

The original purchaser must have liked his thumper, for he kept it in excellent condition, and after he went to his earthly reward, his estate sold it to someone in the U.S. named Geoffrey. One day, Geoffrey forgot to turn on the tap that the first owner had installed in the oil line, and the engine seized up.

The bad luck of this Model 18S was matched by the declining fortunes of the factory that made it. In the late Fifties and early Sixties, the wages paid to English workers improved to the point where a working family could afford the inexpensive automobiles that were increasingly occupying the roads of England. At the same time, Japanese motorcycles that didn't leak and started with the push of a button instead of the swing of a leg became available. Sales of traditional English get-to-work bikes like the AJS declined dramatically, and in less than a decade AMC's fortunes turned upside down; AMC filed for bankruptcy in August 1966.

Unlike the AMC company, however, this Ajay survived. Even in years past, there were enough thumper fans in the U.S. and elsewhere to give even a non-runner some value. Second owner Geoffrey sold the poor beast to Jeff, a friend of the present owner, Don Johnson. Jeff had planned to restore the Ajay but, as so often happens, life got in the way of the planned restoration, and Jeff decided that it would be better if Don bought the bike. So it was that this Ajay ended up in Don's garage.

Once he had the bike, Don tore the engine down, hoping that he'd find something simple, like maybe a stuck piston. He didn't. *"I tore it down piece by piece,"*

Don says. "Everything I looked at wasn't it. Finally, I got clear down to the crankshaft. The bushing on the timing side was welded to the crankshaft."

What had at first seemed like a fun project was becoming less fun by the minute. *"It took great effort to even get the cases apart,"* Don recalls. *"The thing was stuck on too tight."* Eventually all the pieces separated, and Don took them to the late Ed LaCruz at Dyna Reno, who rebuilt the crankshaft and trued it up.

Unlike AMC, who was never known for customer service, the members of the AJS-Matchless club will go far out of their way to help someone with a sick AJS. Through them, Don was put in touch with a fellow who used to work at the Plumstead factory and knew exactly how to put a Model 18's bottom end together. The club also found a crankpin and bushings for Ed to use in the crank rebuild.

Most of the Ajay was original, but the dyno (British for generator) wasn't. To get it sorted out, Don turned again to England. "Sean Hawker in England was a joy to work with," Don says. "Efficient, knew his stuff, very helpful. He helped get the right part and helped with putting the electrical system together. I replaced the regulator with an electronic device. Jampot Spares, also in the U.K., had a lot of parts. You can now buy pre-Monobloc carburetors from Burlen Fuel Systems in Salisbury, U.K. They will ship new carbs with jetting as specified. Even with all the help, it was an effort to find all the bits and pieces."

One item that had Don puzzled was the missing air cleaner. The bike was otherwise complete when purchased, although many parts needed replacing. Checking parts books, Don found there was nothing



missing — stock Model 18s had no air cleaner. "An air cleaner was an accessory in 1953. Think about it. England is pretty wet — you don't really need air cleaners," Don says. He installed the air cleaner now on the bike, and aside from giving the cycle parts a good cleaning, he left the chassis alone. Remarkably, the chrome and paint are original. "This bike is a mechanical, not a cosmetic restoration. There are some items that are questionable, like the seat with the red piping. AJS bikes were blue or black, and Matchlesses were red, so the seat might have come off a Matchless," Don adds.

Made to ride

Don owns and rides a lot of bikes, but enjoys the AJS as a slow-down-and-smell-the roses Sunday rider. "It's fun to work on. Any reasonably competent mechanic can keep it running. It's almost impossible to keep it from leaking, but if you use a lot of silicone seal, and get the primary cover on just right, you might luck out. My bike drools when it is on the sidestand," Don says.

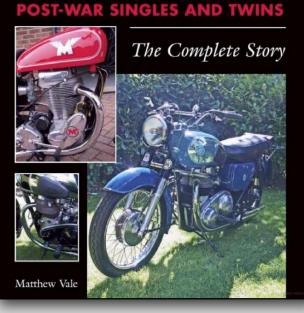
Starting a British one lunger is easy — if you follow the specified starting procedure exactly. Don explains: "You turn the fuel tap on and tickle the carburetor. If it's cool outside, you drop the air slide. You turn the manual advance on the left handlebar to full retard, use the kick starter to get the piston to full compression, pull the compression release, ease the motor over to just beyond top-dead center and give it a good healthy kick. It should start — if you did everything right in the right sequence."

The manual advance lets the rider tune the bike from the handlebars. "As you adjust the lever, you can feel the bike pulling more or less hard. It compensates if the magneto isn't timed exactly right," Don says. The four-speed Burman box shifts nicely, and the brakes actually work. That said, Don notes that the Ajay "isn't fast enough to test the handling." And it runs on today's regular gas, which is considerably higher octane than the miserable gasoline available to British riders in 1953.

"It's more of a character bike," Don explains. "People appreciate its patina. Riding it is fun. I have time to see what I am riding through. I like the chronometric dials, they move a little jump at a time. It's not fast, it's not powerful, it's just pleasant to ride. I own a lot of bikes, and I only keep a few licensed. This is one of them."

Slow it might be, but that doesn't keep this old AJS from being one of the more enjoyable motorcycles made.

AJS and Matchless



AJS and Matchless Post-War Singles and Twins: The Complete Story

Associated Motor Cycles (AMC) produced some of the most iconic British bikes of the 1940s and 1950s. Badged as either AJS or Matchless, the range covered everything from plodding ride-to-work four-stroke singles, weekend racers, two-stroke motocrossers and full-blown Grand Prix contenders.

Illustrated with over 200 photographs, this comprehensive account looks at the history and development of the single and twin-cylinder ranges; the racing bikes; technical details of all major models, and owning and riding AJS and Matchless bikes today.

An invaluable resource for the AMC enthusiast and motorcycle historians, superbly illustrated with over 200 colour and black & white photographs.

Available from Amazon.ca Hard Cover: \$50.50

AJS 650 31CSR Artwork by

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- NUMBER





On the first weekend of September 2002, my son David and I launched "57 AJS", my 350 cc AJS. This, after a gestation longer than that of the great woolly mammoth. Here it is in 2002, in the above photo.

And it looks bloody marvellous, all twinkly in the sunshine, that burnished Lyta tank against the greenery, all framed by the silver birches. AMC got the lines and proportions right — it really is a handsome bike. But it was not always thus...

My part in this story begins on a raw March day in 1981, on Long Island. A friend was moving to Chicago. He said he had a British bike, a scrambler, and his wife had said that if the bike went to Chicago she would not, so would I take it off his hands for a dollar. I said sure, why not, so out we went to the garage. It may once have been a scrambler, but it didn't look like any scrambler I had ever seen:

Once painted Ghastly Maroon, it was now Shabby, Cracked and

Peeling Ghastly Maroon, so rather against my better judgment I handed over my dollar and carted it back to my lady's apartment in New York.



The Puerto Rican guys who maintained the building were tickled — what was this thing, who was this guy — and I didn't know quite what to tell them.

I thought I had a cooking single, but I scraped away the crud, looked in the books and learned that — lo! — I had the short-stroke high compression alloy competition job.

I knew nothing about the bike or the marque, having been raised on Japanese two-strokes, though my dealer in Peterborough all those years ago used to G50's and 7R's on the track, and Ajays on the dirt.

Seems my friend had bought this bike with a mate in Vermont in the mid-60's, and said mate had run it at high RPM down the freeway, with results no less dire for being predictable: valves met piston, and cams met pushrods going the wrong way.

But Joe Berliner was still in business then, so my friend replaced the pushrods and cams, and regularly squirted oil into the cylinder and kicked it over, for fifteen years. So its innards were free, but the rest of it had slowly corroded in the damp Long Island air.

So with the bemused encouragement of the maintenance guys I did a preliminary strip-down and reassembly; joined the AJS & Matchless Owners' Club and got an encouraging (but sobering) note from the Chairman, Bob Boaden, who observed with British understatement that I *"had a lot of work there"*;

I sent the seat to Earl Hungerford in Florida, who did an extraordinary rebuild in ten days for the modest sum of \$85.00; bought that one-off 2.5 gal. alloy tank for a pittance by today's standards; and then left it all in storage while we got married and went to Southern Africa for nearly seven years.

In the midst of all that, I had the privilege of visiting Hamrax Motors in London with a huge list of parts, found them all, and was treated to a fish-and-chips lunch on the firm.

And eventually returned to Canada, and deposited the bike in the basement workshop of our new house. And of course all the usual paraphernalia of married life took over: work, hockey (for David and myself), renovating the kitchen, stuff at the kids' school, hockey, voluntary work, hiking and canoeing, and did I mention hockey?

The Ajay, meanwhile, languished in the workshop, and became known as a bit of a folly. Friends would ask, with a quiet snicker, *"How's the bike going, John?"* Well ... it was in large lumps, and mostly, nothing much happened.

Until one evening in the workshop some three or four years ago. David, by now a teenager, said, "Dad, if you don't fix this bike, I'm going to be" — he chose an impossibly distant day — "twentysix before it's done." So I asked if

he'd help me with it, he said he would, and we set to work rebuilding the Ajay from the ground up.

We were helped on our way by e x e m p l a r y service from the AMOC Spares Scheme, and from Russell's and Armour's in the UK.

Dave Lindsley rebuilt the mag and the dynamo. Gary Courville of Gary's Custom Cycle in Ottawa did a superb job of rechroming the wheels and small bits and enamelling the frame; Rob Roy of Ottawa rebuilt the engine with care and precision; and Fred Crawford of Delta, ace machinist and mechanic, took time out to overhaul the transmission and outwit a few tenacious gremlins.

David and I did the assembly, and the painting and the endless polishing — David did every single one of the 80 spokes, and with his sure hand painted the cast "AJS" in the magchain cover. But the pièce de résistance belongs to Domiracer in Cincinnati, who sold me an unused plus-040 piston!

And of course we learned a lot, about ourselves and about these bikes. David learned the lore of the Prince of Darkness, and all the savage jokes about the Brits drinking warm beer because Lucas makes their refrigerators. (I make these with impunity, born in Dorset with family roots in Sussex that go back a thousand-odd years.) I found things that bordered on the mystical and bizarre.



A "Patent Pending" decal for the infamous pressed-steel primary case — what were they thinking?? That someone might want to copy the wretched thing??

At first we couldn't fit the replacement spindle-and-bearing assembly into the front hub. The outer bearing race didn't fit over the caged taper bearings because — I swear this is the truth — one of them had been fitted back to front! Rob and I figured out how to take off the cage, reverse the offending item, and reassemble. (For a modest sum, I'll explain the secret to readers with the same problem, or to the merely curious.)

While I patiently chamfered the head of the lower rear crankcase through bolt, to make the necessary clearance for the oil-line union, David, astonished, said, "Dad, this makes no sense at all..." "Ah, my son," I said, "this is why the Japanese now make motorcycles, and the English do not."

Near the end of it all, I hooked up my speedo and headlamp, only to find that the drive cable of the speedo fouled the switch on the headlamp, and I had to rotate the speedo 45 to turn the blessed headlamp on — dear God! Are they all like that, or is it just me and this bike??

And sometimes good sense prevailed in spite of everything: when I was polishing a deep gouge in the magchain cover, David said, *"Leave it, Dad — it adds authenticity."* Smart kid.

Of course it all took much longer than we had expected. There were unforeseen misalignments — this bike had been seriously pranged in its murky past, and both the lower yoke and one of those cast foot-pegs you could use for fishing-boat anchors had been bent.

There were always odd bits to be found, and all-consuming hockey schedules intervened (David took time out to help his team win a couple of championships), but in July 2002, with the help of some strapping teenagers, we got it up the basement stairs, through the renovated kitchen (!!) and into the brilliant summer sunshine. But of course we couldn't start it – there was a nice fat blue spark, but the ignition timing was wrong, and only with the help of local fundi David Makin did we get it to fire.

And then we heard a Mysterious and Possibly Terminal Clank, somewhere between the primary case and the gearbox. But Fred Crawford's ministrations sorted that out, and he resealed the primary chaincase so that it didn't leak. (Not much, anyway...)

The gremlins had one last card to play: my pattern front spindle was several thou too large for the hub, and that was why it had been so difficult to adjust the front wheel bearings properly. But Fred skimmed a few thou off the outer bearing races and — voilà! problem solved.

There followed some weeks of low-intensity skirmishing with several bureaucra- cies here and in Vermont to get it appraised, insured and plated, all with the help of Felix Gaim and his merry elves at Cycle Salva- ge. And then, in early September, at last – it moved!



Vintage Motorcycle News

We're privileged to live in the Ottawa Valley. Justly famous for its canoeing and winter sports, it's also great motorcycling country: farmlands and rolling hills on the Ontario side, steeper twisty bits in Western Quebec, hundreds of rivers and lakes, and the whole lot sprinkled with pubs and country inns.

So I've put a couple of hundred miles on the bike this past month. The engine is loosening up, and has lots of oomph. And, it's oil-tight, Rob did his work really well. The gearbox is smooth and positive, and the brakes are, er, adequate. The exhaust note is "healthy", so we'll try to modulate that over the winter.

Of course there's an electrical problem (with my generator), but the Ajay starts easily and is a treat to ride. Twenty-some years back, who'd have guessed it?

<u>A postscript:</u> I wrote the piece above in October 2002. To bring the story up to date:

- David is not yet 26, but he rides the Ajay on occasion, always with a big grin on his face.
- We never did sort out the Lucas electrics. The bike now has a 12v Alton generator, which Fred installed in the winter of 2007/08. This generates huge amounts of wattage, so I now have a halogen headlamp and other Bits of Modernity like a negative-earth system.
- The engine is still being broken in. Not long after the restoration, we went to Africa once again for a few years, so the bike, now transformed, languished in storage for a bit longer.
- It's part of the family, though. I have an '86 R80RT, with brakes and indicators and things, so I don't ride the Ajay a whole lot. I was musing one day about maybe selling it, but Marcia, my wife, said, "John, you can't do that—it would be like selling David or Meg!"

- Each spring, we go through a now-familiar routine. I fire up the Ajay, and the neighbourhood cats dive under cars, dogs bark, horses twitch, beautiful women swoon, and strong men weep tears of unrequited longing.
- In July 2008, I was surprised and delighted when the Judging Committee of the Ottawa Section annual Rally, an august and wise group of motorcyclists, awarded the Ajay "Best in Show, 1945 – 60". And who am I to challenge their unerring judgment, after all? Here's the bike in late June 2008:

Post-postscript from the editor:

John did sell the bike a couple of years later, after all. It went to a good home in Hamilton, to a guy who likes big English singles, and needed a 16MCS to complete his AMC collection. The proceeds financed John's touring bicycle and his son David now lives with his wife and two daughters in the Gold Coast, in Queensland, Australia.



AJS Motorbike Artwork by

Artwork, Prints, T Shirts, Mugs, Caps and more can be found at: <u>https://www.redbubble.com/people/Niglom?asc=u</u>







The AJS 31CSR was purchased new in 1961 for the sum of \pounds 120.00 by the first owner Peter Bateman.

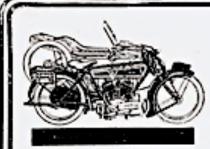
He used it as a daily transportation to and from work six days a week and on Sundays it could be anywhere in the UK.

At that time he was riding about 12,000 miles a year. In 1965 they took a summer tour through Sweden and Norway without any major issues. In the ensuing years that he owned the bike he put, according to best recollection, 100,000 miles on it.

I bought the AJS, as the second owner, in 2007. I have done minimal maintenance on it and put about 12 miles a year on it. The odometer has 66,000 miles on it now.

It's a high compression engine and has a timing advance for easier starting, it has the high camshafts and the Siamese exhaust system which according to AJS gives an extra 15% boost in power. The engine is a 646cc that generates 34 BHP at 5200 RPM and the standard 4 speed gearbox. With the slim width and the profile the handling is superb. When this motorcycle was new it was a IO8 MPH motorcycle. I've never done that but I've been up 80 MPH and that was fast enough for me. The 3ICSR was a faster, quicker accelerating and better handling motorcycle than the Triumphs and BSA of that year but AJS had made the connection with Matchless and the CSR was taken out of the lineup.

But as you run up the rpm's and shift through the gears you're treated to a beautiful sound that's lost in history. The sound of a powerful British Twin.

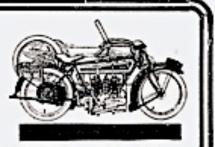


IN two previous advertisements we have separately treated in brief, with the functions and merits of our 1917 range of models.

Here are a few of their principal points for the guidance of buyers "looking-ahead."

Model D – the Passenger Machine – 6 h.p. Twin-cyl. 750 c.c., 3-sp., typifies A.J.S. entirety in highest class combination, design and equipment, 484 – Complete with Perfected Side car, featuring many provisions for added comfort and convenience, £102 188.

Book your order now for an after-war



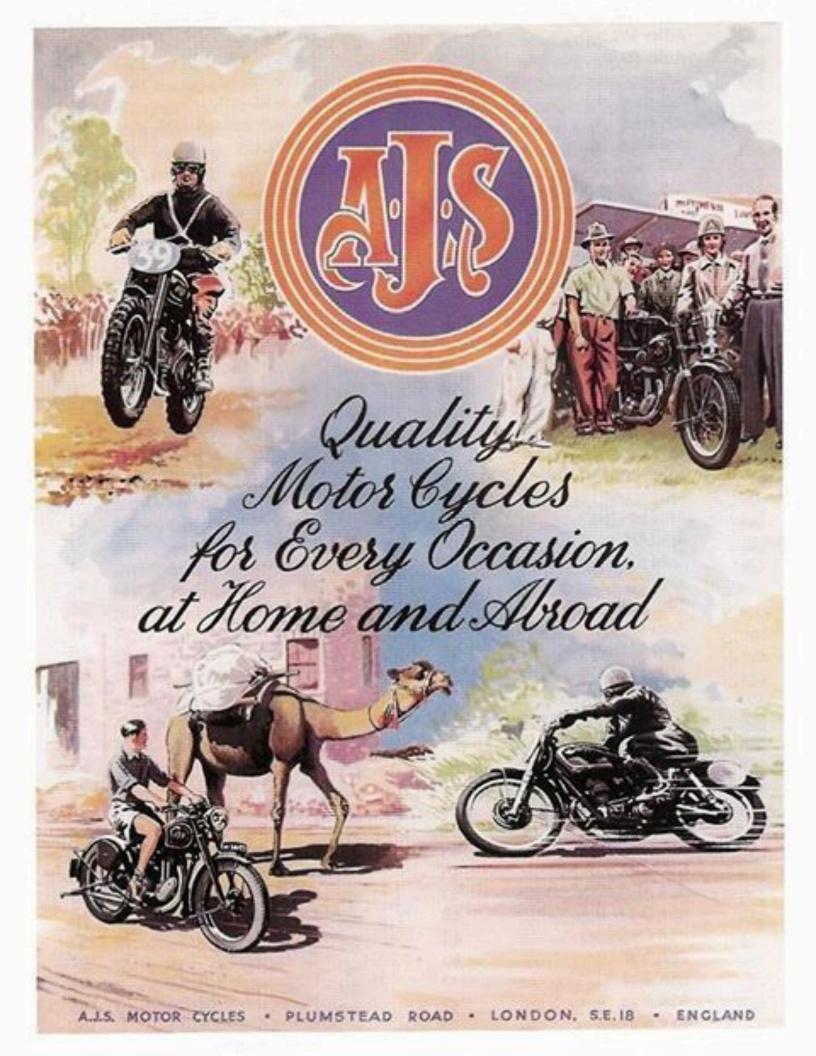
Model A — Solo or Sidecar — 4 h.p., Twin-cyl., 550 c.c., 3-sp., is a complete replica of Model D except in dimensions, weight and power — £76. Complete with Sidecar, £93 17s.

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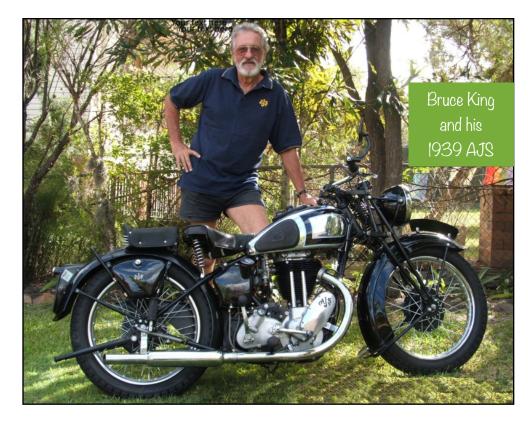
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From Down Under: The Wonderous Machine, my 1939 AJS model 8.

story by Bruce King Photos by - Sue Riley



Sometime in 1995, one of my Kiwi pals, a certain Marty Hewlit of Katikati, said "you should have an old AJS" and he just happened to know a bloke in Wellington New Zealand with a 1939 model 8 twin port 500. While I didn't cave in totally, I said I would consider it. Much to my chagrin, said AJS turned out to be a frame with motor, gearbox and oil tank - my enthusiasm warmed and the restoration got started at glacial speed.

Over the next six years the junk pile kept getting added to and a vague motorcycle grew. 1939 AJ's have some unobtainium on them, eg. The wheels are Palmers and it took begging and cajoling to get a redeemable pair. Chrome platers saw the project as a way to settle second mortgages and a reasonable tank was turned into a swan. The front mudguard was sourced in Norway and thanks to Norm and Linda Maddox the missing Palmer rim became available.

Ken Mc Intosh the Manx Norton builder, reached into his goodies bag and provided the handlebars, another piece of unobtainium. A country antique store provided the headlamp shell and lens with other parts being sourced from several UK firms. After all the waiting there were no more excuses as to why the restoration could not proceed. The motorcycle's crowning glory, its beautiful petrol tank and its thousand dollars worth of chrome got a Brian Medrecroft superb job of painting

My great pal John Hartles took over the real work and after all his efforts a bike appeared. John rode the wonderful thing in the Chelsea Walsh Hill Climb and recorded 39.9 seconds, which was only bettered by post 1960 motorcycles.

I was rapt to finally ride the 1939 AJS to the New Zealand Jampot Rally, where the first prize for pre 1940 and Best Single awards, were added to the sideboard. (Now no hunters please)

comments about trophy hunters please).

In March 2007 the bike is finally wearing a Queensland number plate and Wendy and I look forward to every rally we can get to. All this from a man who used to believe that only between 1955 and 1970, did interesting bikes get build. Now perhaps Barry Deeth and Company won't keep saying "you need a girder fork bike in your collection".

They were right!





I've had my AJS for several years therefore I can only speak of my personal experiences with the '53 18S model.

When I first purchased the AJS, it was in poor condition; not complete and not running. It took some time gathering what was needed to make it a complete motorcycle.

I am not a purist (not 100% at least) therefore it was not crucial for me to bring the 18S back to what it was back in the 50's. Getting the bike on the road to my personal driving standards was my goal.

I'm not going to go into the details of my personal project, but some of the small nuances of the AJS follow:

The electrical system; yes the infamous LUCAS electrical system. We all know the ins and outs (or we think we do) of this simple, yet so mischievous and mysterious power system. My personal setup is unique. I am running the LUCAS magneto for spark and no dynamo; that's right, no dynamo.

I have a small 12V DC battery installed with direct power to the LED tail/brake light. A simple power converter converts 12V to 6V to run the old style headlight.

A total loss power system. The battery is a small acid glass mat (AGM) battery that fits perfectly sideways in the original AJS battery holder.

The battery was designed for a rechargeable kids toy car; I simply recharge the battery as needed. I don't run the headlight very often, therefore the power is mostly used for the low power LED brake light.

I found adding a modern BrightSpark EasyCap capacitor reliable and an efficient component of the spark system. Do not fear opening up the magneto, with the right tools and care the task is not as bad nor daunting as it is made out to be.

The driveline is simple, efficient. The right side shifting (1 up 4 down) also being opposite of the norm can be confusing at times.

Driving the AJS up hill is a good place to refine the hand lever advance/retard adjustment.

As far as the oil leaks are concerned, I gave up trying to seal every nook and cranny. An old cookie sheet has found a home underneath.

All in all I truly enjoy driving the AJS on weekends for short jaunts to the local coffeehouse or errands to the grocery store.

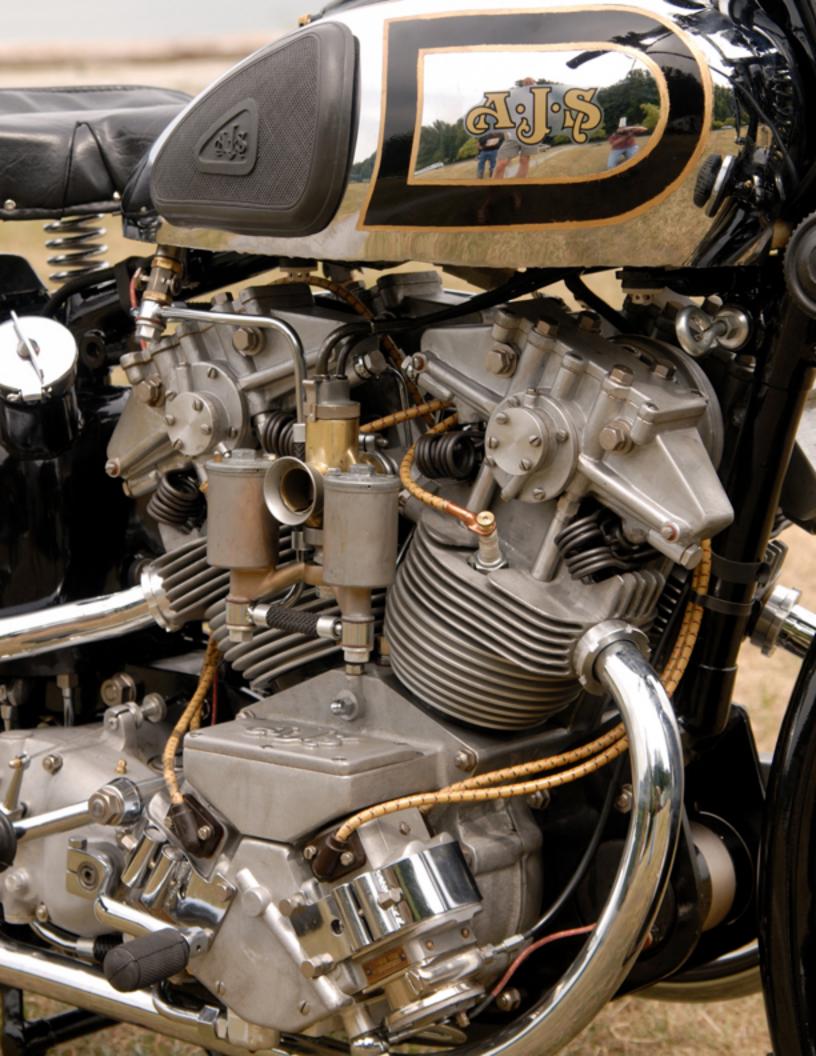
The bike catches attention with friendly conversation at gas stops and in parking lots. There are no races to be won, I just thump along to the tune of the 500cc single with a smile on my face.

Lucas Kistulentz's 1953 AJS Model 185









RESURRECTING THE MIGHTY AJS V4 FROM 1936

The AJS V4 was an advanced engineering effort undertaken by the British motorcycle company in the mid-1930s, the first prototype was intended as a road-going motorcycle and it was shown at the Olympia Show in 1935.



BUILT FROM SCRATCH AJS V4

Riddles: Starting with a line drawing that showed nothing more than engine internals, Vancouver builder Dan Smith began the process of reconstructing the sporting but obscure AJS V-4, of which perhaps only 30 were ever built.

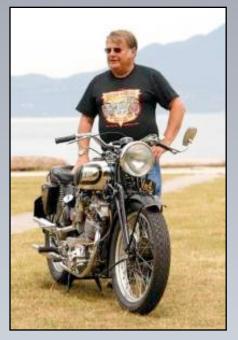
Many of the parts are hand-turned while some have been modified to fit as donor parts. However, the last component to be cast was the primary cover.

Smith had been unsure about how the drive to the forward-mounted generator would work and had even contemplated an auxiliary shaft. When the rest of the pieces were in place, the solution was a simple chain drive.

Dan Smith was a man obsessed with a 70-year-old black- and-white

photo of a motorcycle few even knew had ever existed. This machine he was determined to build, from the ground up, with nothing more than his own remarkable skills as a guide.

Robert Smith tells the story ...



Most of us can turn a wrench to do basic bike maintenance. Some are capable of restoring a rusty barn find to its original state, even making parts where the originals no longer exist. But few are those who can build a complete motorcycle engine from bare metal.

Even then, a capable machinist could probably shape the parts from billet with the aid of drawings, a CAD-equipped computer and a CNC mill. But what if there were no drawings, or even a model to work from?

All this makes Dan Smith's re-creation of the groundbreaking air-cooled 500cc AJS V-4 even more remarkable.

Not a restoration or a rebuild, and without components to copy, Smith designed, cast, machined and assembled his V-4 from a black-and-white photograph and a cutaway sketch of the 1936 prototype.

And if you didn't know AJS built an air-cooled V-4, you're not alone.

THE WOLVERHAMPTON FIRM OF A.J. STEVENS earned a solid sporting reputation during the 1920s with their racing "Big Port" 350cc single, while also building sturdy side-valve V-Twins for sidecar use.

Like many other enterprises, it was the financial collapse of 1929 that scuttled AJS. In spite of diversifying into car and truck bodies, furniture and even radio cabinets, the company continued losing money and by 1931 was unable to pay its creditors. Jumping at the chance of acquiring the AJS name, the Collier Brothers of Plumstead, London snapped up the company, merging it into their own business. The famous grouping of AJS and Matchless was the result.

Though they had a sporting reputation of their own (a Matchless won the single-cylinder class in the first Isle of Man TT race in 1907), the Colliers certainly intended to exploit AJS's racing heritage. Hence the motorcycle that was the sensation of the 1935 Earls Court show in London: an air-cooled V-4 designed by Bert Collier but dressed in AJS livery.

It was shown with lights and dynamo as a fast road model, but exposed "hairpin" valve springs and space for a supercharger suggested it might be raced, too.

The four cylinders were arranged in a 50-degree V with a single camshaft on each head. A central crankshaft sprocket drove the single timing chain, which was tensioned by an idler between the cylinders. Two carburetors, one on either side, fed mixture to the 50mm bore by 63mm stroke cylinders, with the exhaust exiting through four separate pipes. Two bevel-drive magnetos hung on the "timing" side of the engine providing the sparks, while a front-mounted DC generator right where, some speculated, a supercharger might fit—fed the battery.



Though it never went into production, contemporary reports suggest that parts for as many as 30 air-cooled V-4s were produced.

It was certainly raced in 1936, the factory entering two machines in the Isle of Man TT, with Harold Daniell and long-time AJS works pilot George Rowley as riders, though neither machine completed the course. The racer appeared again in 1938 with a supercharger, but apparently suffered overheating problems.

In 1939, AJS entered a liquid-cooled V-4 in the TT and the Ulster grand Prix: in the latter race it led for three laps before rider Walter Rusk retired with a broken fork link. The "wet" V-4 was also



raced briefly after the break for hostilities, until the ban on superchargers terminated its development, and the parallel Twin "porcupine" took its place.

VANCOUVER'S DAN SMITH IS A LEGEND IN CANADA'S VINTAGE motorcycle scene. A long-time Vincent owner and a guru of the Stevenage machinery, he owns two complete examples: a fully tricked out series C Shadow with alloy wheels, modern carbs and his own modified "short rod" engine; and a Series B Rapide that he's ridden not only to Tierra del Fuego and most of the way back, but also north to the Yukon territory.

And it was his Vincent tuning skills that got him involved with the VIBRAC team, which mounted an attempt on the blown fuel world speed record at Bonneville Salt Flats in 2003 with the ex-Max Lambky streamliner. As crew chief, Smith coordinated rebuilding and tuning the two Vincent engines in the streamliner. With Dave Campos as pilot, the streamliner clocked close to 200 mph before a backfire broke one of the crankshafts.

His last two restoration projects, a 1934 BSA Blue Star and a 1933 Matchless Silver Hawk, were rescued from almost total obliteration, with Smith making many of the missing parts himself. How did this man get into motorcycle restoration?

"The motorcycles came first," he says. "I was knee high when I realized if a guy learned how to be a machinist, he could make motorcycle parts. The fascination with the whole thing is tools. You use the tools in connection with the motorcycles." Why the AJS V-4: and how does the Ajay V-4 compare with the Silver Hawk?

"This engine is just fascinating," he says. "The Silver Hawk is pretty mundane. You can't spin that thing fast, you couldn't get any horsepower out of it. It's not made for what the Ajay was made for, for going fast. This is quite a design."

Smith admits, though, that the V-4's power is always going to be restricted by the sharp turn the mixture has to make to get from the carburetors into the cylinder heads.

His interest in building the V-4 goes back 20 years, though preparation really started seriously in the mid 1990s. And not surprisingly, re-creating a motorcycle that was never much more than a prototype and was last seen nearly 70 years ago took a while.

He started with a solitary black-and-white photograph and a cutaway drawing—not an engineering drawing but a line drawing showing the general layout of the engine internals.

Both Vic Willoughby and Bruce Main-Smith in the UK provided some useful insight into the V-4 project, and Dan Smith also visited Sammy Miller's museum in New Milton, Hampshire to collect some dimensions from the supercharged, liquid-cooled 1939 race bike.

"I did some sketching and scaling," he says. "I had these dimensions, and I couldn't fit anything around to make it work. After quite a bit of time, I concluded that the water-cooled one was completely new. I was trying to duplicate the crankcase: water cooling would have allowed them to make the engine more compact with shorter rods.

Vintage Motorcycle News

"I couldn't make the dimensions work for the air-cooled engine."

Smith next attempted to scale many of the components, interpolating angles and dimensions by projecting the axes shown in the cutaway drawing. It seems there may have been some artistic licence used to make the drawing look right to the eye, and the angles shown are deceptive.

"There are, I think, six different diminishing points," he says, " so it's impossible to scale. The cambox was very difficult to decipher because of the view. I tried to mimic it as much as I could and keep it to scale. It's very difficult to make something exactly the same."

Starting from the known two-inch bore diameter and the 50-degree vee (and allowing a wide enough flat between the bores to accommodate the cylinders) governs the deck heights for the cylinders on the crankcase mouth. Then, by working out the rod length based on the pistons' dimensions, "I got to an accommodation of numbers I could use," Smith says.

Designing the bevel gear drives for the twin magnetos was a challenge. With dimensions taken from the liquid-cooled engine, it proved impossible to fit gears with the right number of teeth with the 50-degree angle between the two magnetos. He settled on spacing the magnetos at 60 degrees, which gave room for the bevel gears. The half-time speed for the magneto drive is achieved through two reduction gears.

Next Smith made a full-scale model of the engine in wood and fitted it with a period Burman gearbox into a "Denly" AJS frame.

The frame was developed by Norton/AJS racer Bert Denly, who added a third chainstay running from the seat tube to the rear axle mount to the standard AJS frame.

Denly and his co-pilot, one Mr Baker, took the three-hour 350cc world speed record at Montlhery in 1930 at exactly 100 mph on a Denly-framed AJS R7 racer. The frame was acquired through Smith's network of contacts on Vancouver Island.

So, with a wooden mock-up of the engine for final sizing and for fitting into the frame, work could start on making the major castings.



Smith produced the patterns from which the components were cast.

Then with the crankcase dimensions fixed, he was able to put together the crankshaft, flywheels and camshaft drive. Though the original V-4 was said to have used six main bearings for the crankshaft, Smith only saw the need for five.

"I don't know why they'd need six," he says. "In order to keep it narrow, you don't want to put two bearings on the drive side. It's only maybe 40 horsepower at 6,000 rpm and perhaps 40 pounds of torque."

He used two inboard main bearings in the crankcase, two outboard of the flywheels and one in the timing chest to prevent end float. Next came the connecting rods.

"It's a knife-and-fork rod like a Harley," says Smith. "I had to make those, work out the cranking ratio and establish the rod lengths."

Then the top end. Smith used pistons from a Suzuki DR100, "so I consequently ended up copying the combustion chamber, and I also used their cam profile," he says, "but the cams are individually verniered with pins, like a Manx." The valves themselves are turned down items of Vincent heritage, something that would surprise no one who knows Smith's reputation as a tamer of the Stevenage monsters.

"I was going to make valves, then it dawned on me I have old Vincent valves by the bucketload around here," he says, "so I re-machined them. I think the splay of the valves might have been slightly wider than I have, but I was restricted by the squish band."

Smith has incorporated eccentric rocker adjustment. "The V-4 used alloy rockers, so that's what the

Vintage Motorcycle News

replica has," he says. There are also small pumps to scavenge oil from the camboxes back to the tank. "I had to make those too."

The single timing chain runs from the central crankshaft sprocket, over one camshaft, under an idler sprocket between the banks of cylinders, then over the second camshaft. The chain itself is from a Suzuki GS 400—or rather, from two GS400 timing chains riveted together. Like the other Suzuki parts used in creating the V-4 (and the hairpin valve springs from an NSU Max!), the chains were supplied by ex-racer Murray Neibel of Vancouver dealership Modern Motorcycling.

For the magneto drive, Smith not only cut the bevel gears himself, but also made the gear cutters. For practice, he'd just finished cutting three sets of planetary gears for a 1915 Harley-Davidson two-speed hub. And though it took him a month to finish them, "they made a beautiful fit," he says. "Tm really happy with how they came out. It took a month to complete just this job, but cutting bevel gears is always fun."

The magnetos themselves are both by British Thompson-Houston: the rear mag is a BT-H KDTT donated by local ex-motocross racer, Denis Mitchell. The forward mag was an eBay find and came from Tasmania. Remarkably, the name plate is stamped "KDV 50 AJ4," though it's unlikely to be a reference to the V-4.

As well as the magnetos, the timing drive spins the gear oil pump borrowed from a BSA A10, with worm drive taken from a B-series BSA engine. An anti wet-sumping valve and pressure relief valve complete the lubrication system. Smith chose two float bowls for each carburetor: contemporary reports suggest the V-4 may have suffered fuel starvation problems; if so, he hopes this will prevent it.

The last component to be cast was the primary cover. Smith had been unsure about how the drive to the forward-mounted generator would work and had even contemplated an auxiliary shaft, but when the rest of the components were in place, the solution was a simple chain drive. Also chain driven is the standard Burman four-speed gearbox mounted behind the engine.

"I didn't have that until (the engine) was in the frame. I thought, 'Okay, the crankshaft's here and the transmission's here, so now I can draw the primary case.' You look at the photograph and it's really just joining the lines."

By April 2006, Smith's recreation was essentially complete and "dry" assembled, though the cams still needed to be indexed. Before that, he had to dismantle for painting and plating. Oh, and work out the carburetor settings, ignition timing ... ON JULY 8, 2006, JUST OVER 70 YEARS SINCE ITS PROGENITOR HAD run in the Isle of Man TT, Dan Smith's V-4 burst into life with a throaty rasp from the four exhausts—not smooth like an in-line four, but with a ragged beat not unlike a Laverda triple.

A couple of weeks later, I followed him to Spanish Banks on Vancouver's Burrard Inlet for some photographs, reveling in the sound and sight of the V-4. It's a magnificent machine, and a wonderful realization of Bert Collier's creative vision.

The thirties were a time of great engineering advances, and the AJS V-4 represents perhaps the pinnacle of that decade's motorcycle design.

Very few machinists have the foresight, ingenuity and skill to pull together such a project, and I know I'm not alone in appreciating Smith's efforts to recreate one of the era's most significant motorcycles.

Source: Robert Smith, May 2007 Canadian Biker











The AJS Porcupine's Prickly History

A supercharger and a host of innovations Source: Story Kevin Cameron & Photos Douglas MacRae from Cycle World

Here in all its dark, fluid grace is the AJS Porcupine, a parallel-twin that was England's postwar bid to rise above the limited power of traditional British racing singles with more cylinders and higher revs.

In 1949—the first year of the new FIM world championships—rider Les Graham would give the Porcupine its only championship.

The bike in these photos was not the championship-winning 1949 E90, but rather the last redesign in 1954 with 45-degree-inclined cylinders.

The name "Porcupine" originated with the quill-like spike finning between the pair of cam covers of the original engine, whose cylinders were just 15 degrees above horizontal. A true screen deflects the wind on this most exotic AJS racer.

In the 1920s AJS had led the high-tech development of overhead-valve and then overhead-cam racing singles in the Isle of Man TT races.

The Collier brothers, who joined AJS, Matchless, and Sunbeam into Associated Motor Cycles (AMC), had themselves been pre-World War I TT winners.



The Porcupine's usual origin story is that it was sketched on napkins during tea breaks as World War II raged on.

In fact, its creation was more deliberate. In 1939, AMC's Donald Heather had teamed former Norton race boss Joe Craig with draftsmen/detail designers Vic Webb and former Vincent engineer Phil Irving in an off-limits drawing office.

The main task of that office, Irving says in his autobiography, was "mainly the -design of a racer-type named E90S, the 'S' standing for -'Supercharged."

The goal of the E90S was to overcome the multicylinder head start of BMW (which won the 1939 500cc TT with a supercharged flat-twin) and Gilera (which had won the 1939 European championship with a supercharged four).

Why a twin? AJS had shown an air-cooled V-4 street bike at the 1935 Olympia Show, then invested much effort in trying to race it in various forms.

What did the V-4 teach them? That adding complexity increases a bike's weight faster than it improves its performance.

Rider Walter Rusk on the supercharged and liquid-cooled AJS V-4 was as fast as the Gilera at the 1939 Ulster Grand Prix, but the bike remained a monster to handle.

Harry Collier's response was to begin designing a supercharged in-line triple. The engine was mounted "headfirst" to deal with the extra heat of supercharging—its cylinders horizontal so air would directly hit the cooling fins between its cam boxes.

When Joe Craig was hired that same year, Collier irritably ordered this Triple's parts and drawings destroyed, saying, "Joe Craig will never learn anything from us here."

Craig and AMC planned a compact unit-construction liquid-cooled parallel twin with a Zoller eccentric-vane blower mounted atop its gearbox.

There is evidence that this engine may have had vertical cylinders with intake ports between the valves (to prevent charge loss from intake to exhaust), fed by long intake pipes from the blower.

With nothing radical in its design, this engine was expected to make 65 hp—10 more than the complex and heavy 1939 V-4. Frame and cycle parts were drawn by Phil Walker, who would later design the



Rod Coleman leads the 1954 Belgian GP at Spa Francorchamps on a Porcupine.Mortons Media Archive

350cc AJS 7R "Boy Racer" OHC single.

Craig saw an engine run on the dyno before he returned to Norton in 1946.

Though England had been on the winning side in World War II, times were hard: Wartime food and fuel rationing remained in force. There was nothing extra.

Now came a terrible blow: In September 1946, racing's ruling b o d y b a n n e d supercharging. The new AJS racer was unusable.

With Craig at Norton and Matt Wright and Phil Irving departed to Vincent, the task of saving the company's investment by conversion to air-cooling and unsupercharged operation fell to Vic Webb. Irving noted that the result "was equipped with a new cylinder head designed by Vic Webb with conventional inlet ports, and with transverse fins broken up into a number of pieces (the 'porcupine quills') to assist airflow."

The near-horizontal cylinder position of this E90 clearly came straight from Harry Collier's Triple. Power was disappointing— 29 hp on its first dyno run, rising to

Nine gears run under that Y-shaped timing cover to drive overhead cams. Magneto on early engines was also gear drive but later was replaced with chain for reliability.Douglas MacRae





Dry clutch, unitized engine/gearbox and gear primary drive made the AJS advanced for its day.

36.8 by its press launch in May 1947—about the same as the 500cc single-cylinder Manx Norton on the rationed low-octane fuel.

The engine was ruggedly built for supercharging with both crankshaft and gearbox unitized in the same Elektron magnesium casting.

Forged RR56 aluminum con rods used Vandervell plain insert bearings. A four-speed vertically stacked Burman crossover gearbox was driven through a gear primary and large dry clutch.

A Y-shaped housing on the right contained nine gears driving the two overhead cams plus an accessory shaft across the top of the gearcase. This drove the magneto and oil pumps for this dry-sump system. Design for supercharging had left its mark. Combustion chambers were deep, with large-stemmed aircraft-type valves set at a 90-degree angle—not the faster-burning and shallow 58 degrees that Norton would a year later give its export twins.

Exhaust ports were huge. The mounting pad for the Zoller blower remained atop the gearbox. Crank mass, originally supplemented by the substantial supercharger rotor, was low, leading to stalling in slow corners.

Intake flow entered two Amal GP carburetors, which were supplied with fuel by a single cylindrical float bowl between them.

With carbs at roughly 45 degrees, curved intake pipes were required to carry mixture to the ports. One of the Porcupine's several riders, Ted Frend, would years later say that carburction had been the bike's greatest problem.

In the 1947 Isle of Man TT, Les Graham was pushed down to sixth by a crash, then had his chain run off.

After a year's additional development, none of the Porcupines finished in the 1948 TT.

Unlike Norton or Velocette, AJS had no continuing in-house racing know-how. AMC boss Donald Heather therefore asked Matt Wright (lately returned from Vincent) to take over development.

He further adapted the Porcupine to unsupercharged operation, first reducing valve angle to 79 degrees, and then adding a deflector in each port to encourage turbulence and improve combustion.



AJS onslaught at the 1954 Isle of Man TT.Douglas MacRae

Wright's program achieved 50 hp, but company policies worked against them.

Riders were required to use AMC's own unadmired rear suspension units. The use of streamlining was forbidden, and when engine airflow pioneer Harry Weslake offered his services, Donald Heather remarkably turned him down.

Everything seemed to be going their way in the 1949 TT, with Les Graham and Ted Frend leading 1-2. Then Frend crashed out, leaving Graham leading by miles, just 2 miles from the finish. Then the engine stopped. With Jock West (TT and grass-track racer who also worked for AMC in sales) trotting beside him shouting encouragement, Graham pushed in the 2 miles for 10th place. The magneto drive had failed.

Graham took several victories (and a retirement with a split fuel tank) to take the world 500cc title by one point. Other teams advanced more rapidly. Norton's new Rex McCandless-designed "Featherbed" twin-loop chassis made the Manx faster.

Geoff Duke would easily have been champion on a 500 Manx in 1950 had his tires not delaminated (cotton plies at 150 mph!).

Gilera and newcomer MV Agusta saw that handling makes power usable. Both "Nortonized" their air-cooled in-line four frames as fast as they could—abandoning spindly prewar chassis, jerky friction dampers, and antiquated girder forks.

In the 1950 TT, the Porcupine's best finish was -Graham's fourth behind three Featherbed-framed factory Norton singles.

The Porcupine's 21-inch wheels were now downsized to 19. Engine oil was moved to a boatlike underengine sump—to ease starting by allowing preheated oil to be poured directly into the engine. Wheelbase and weight were reduced.

Despite such effort, AJS steadily lost ground to the Gileras. While Norton's Craig gained wisdom from punishing dyno-race simulations, political forces within AJS looked for someone to blame for their lack of success.

For 1952, the machine was completely redesigned by Ike Hatch and Phil Walker, lifting the engine's cylinders to 45 degrees. Its cooling spikes were replaced by normal fins. A "softer" chain drive was substituted for the gears that had previously driven the magneto. Wright commented that "this





This 1954 AJS E95 Porcupine was bought by Robert Iannucci of Team Obsolete with empty engine cases in 1983. "I was obsessed with Porcupines," says Iannucci. "I waded through s—t in a pig farm in search of them." A complete engine was secured in 2000 at auction, and it was restored to running condition. It's been campaigned in vintage races, but its moment of glory for Iannucci was the Porcupine's return to the Isle of Man for the Classic TT in 2015, where it did a demonstration lap in the hands of longtime TO racer Dave Roper (pictured). "It was a beautiful lap," recalls Iannucci. "It was perfect, the plugs, everything. It's the stuff dreams are made of."

whole project was a total waste of effort."

For 1954, AJS hired the man then considered to be England's top racing-development engineer: Jack Williams. He replaced the AMC rear suspension units with the Girlings preferred by everyone else.

Rubber sleeves prevented the previous "shaking off" of the carburetors. A new fuel tank, pump, and weir system (a kind of header tank and dam/spillway setup for consistent fuel delivery) replaced troublesome and vibration-sensitive float chambers.

In the 1954 TT, AJS team rider Derek Farrant crashed on Lap 1. Rod Coleman ran fifth for three laps but pitted with a split fuel tank, coming home 12th. Bob McIntyre finished 14th.

As postwar auto production took sales from motorcycles, GP racing was revealed as an extravagance not the powerful sales builder it had been in the 1920s.

Triumph and BSA, who had hit the US bike market early, prospered. Those counting on domestic sales did not. At the end of 1954, all British factory GP teams ceased operation.

Had the Porcupine succeeded, it would today be remembered for its i n n o v a t i o n s — u n i t i z e d engine/transmission construction, gear primary, and a modern chassis with hydraulic-damped telescopic fork and swingarm.

There were two reasons for the Porcupine's lack of success. First, the hasty conversion from supercharged to unsupercharged operation was incomplete and failed to incorporate best contemporary practice, and second, AJS management had made the classic mistake of initiating a project that needed more-intensive development than they were willing or able to provide.

The Porcupine remains a glorious relic of an era marked by experimentation and possibility and survives to remind us of our successes and failures.



THE STORY OF THE AJS 7R

Phil Walker designed the 7R with a single cylinder, single overhead camshaft engine – based on the lessons learned with the pre-WWII "cammy" engines.

The chain driven overhead camshaft gives the 7Rs engine a distinctive look on the timing side, with an oftentimes gold-painted timing and cam cover sitting below the AJS fuel tank with its large knee indents on either side.

The air-cooled engine sits in a duplex frame, and suspension is handled with telescopic shock absorbers at the rear and Teledraulic forks up front. A small headlight fairing with a Perspex shield offers the rider a little cover when crouched down behind the dials on the straight.

The original AJS 7R had a relatively svelte kerb weight of 285 lbs (129 kgs), which meant the AJS 7R3 was built with a 3-valve head, and in 1954 the 7R was further improved – the engine was lowered in the frame to lower the centre of gravity, and further engine tweaks improved power to 40 bhp (at 7800 rpm). This newly improved 7R won the first two rounds of the World Championship and took a win at the Isle of Man TT – not a bad effort for a bike first introduced 7 years earlier – especially when you consider the pace of engineering advancement at the time.

Wins for the AJS 7R would continue right into the 1960s, with victories at the Junior Manx Grand Prix races in 1961, '62, '63, and a 2nd place finish in 1966. Interestingly the 7R also won the inaugural F.I.M. 500cc Motocross World Championship in 1957 – Bill Nilsson of Sweden modified a 7R road racer into a motocross machine and nailed a convincing victory. Not something Phil Walker ever likely envisaged for the model.

The 7R you see here has been comprehensively restored to original and correct specification, including its correct AMC gearbox – which had been chosen to replace the somewhat antiquated Burman unit in 1958.

It's difficult to overstate the importance of the 7R, despite the fact that many of us now view a 350cc as a "small" motorcycle, this bike was anything but.

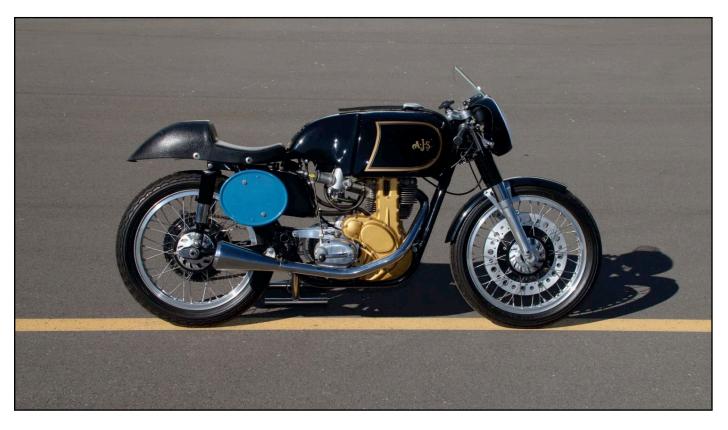
With 37 bhp and a kerb weight of 285 lbs (129 kg), the mighty AJS 7R is a hugely entertaining bike to ride, with handling abilities better than many far more modern motorcycles.

its 37 bhp could be put to good use. Over the course of its production run the model was progressively modified in an effort to keep up with the advanced multi-cylinder race bikes coming out of Italy. The bore/stroke was squared a little from 74 x 81 mm to 75.5 x 78 mm to allow a higher red line, and the valves angles were narrowed.

In 1951 an experimental derivative called



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Diamond in the Rough: 1931 AJS S8 DeLuxe By Greg Williams

One man restores a derelict AJS S8 DeLuxe, in a year to the day, in his two-car garage.

Finding a gem in the rough is a fantasy for everyone in the classic motorcycle hobby. You know the dream, the one where you open a heavy door on creaking hinges, revealing the inside of a dim and dusty shed. Peering into the gloom, soft light glints off the faded chrome of a handlebar. Slowly, the hulking form of an abandoned machine begins to take shape.

It can happen, and the world of the internet has made it easier — don't believe that all of the "barn finds" have been snapped up, because this story is proof that old motorcycles are out there just waiting to be found.

Less than two years ago, restorer and rider John Whitby of Calgary, Alberta, Canada, was going through his morning routine of combing Kijiji.com, an online ad site. He was in the Classic Cars section of the Saskatchewan listings and paused when he saw a post for a Mercury. Curious about the car, he clicked on the ad.

"I was looking at the photos of the car, and in one picture I could make out the remnants of a motorcycle," John says, adding, "I could see a girder fork, a bit of chrome on a gas tank and handlebars that were tipped up like cow horns."

John might not have pulled open a door to a dusty shed, but he'd discovered the proverbial barn find in a poorly lit photo in an internet ad. So, he dashed off an email to the Mercury seller: "Sorry, I'm not interested in the car, but what's that bike I can see?" John asked.

Instead of a brush-off, John got a reply that the bike was a 1931 AJS S8 DeLuxe. Not surprisingly, John's next question was "Is it for sale?" Yes, indeed it was. The seller had owned it for 45 years, but was downsizing and the toys had to go. A price was agreed upon and John simply asked when could he come get it.

On Dec. 19, 2014, John and his wife, Sue, drove through snow and ice fog some 375 miles from Calgary to Saskatoon, Saskatchewan, where they loaded up the AJS in John's truck. The story John got from the seller was that the bike came out of Kapuskasing, a town in Northern Ontario, in pretty much the same condition it was in when John got it — rusty, well used and abused. A few parts had been gathered for the project, including a rebuilt Lucas magneto plus a brass-bodied Amal carb. When John landed the AJS in his suburban two-car garage, he got to work researching what he'd found.

Reviving the S8 DeLuxe

John's AJS bears serial number 63298. The first 1931 S8 produc-



tion serial number was 62466, and the last 63365. Total production for the model year was 899 units, putting John's machine close to the end of the model run and close to the end of the AJS factory under Stevens' family ownership.

While John's AJS might have been rusty, the engine turned over. There was no compression, however, and a previous owner had attempted to modify the ignition system by installing a distributor and coil. One of the original timing gears had been crudely brazed to the shaft of a distributor.

The wheel rims were badly damaged and the fenders were good only for patterns. An original Terry solo seat frame had been modified with a seat pan from either an Indian or a Harley-Davidson, and once this pan was removed the frame was usable. Before John even went to Saskatoon to pick up the AJS, he had begun collecting parts, and once he had the bike he spent another three months gathering close to 90 percent of what he'd need.





He found a headlight and taillight at Vintage Replica in the Czech Republic, while the handlebars, bar-end levers, magneto and choke controls came from Moto Mania in Austria. A replica front fender was sourced from eBay, and two C-shaped 6-inch wide fender blanks were also found online.

John joined the AJS & Matchless Owners Club Limited, and found parts and knowledge in the Pre War section of the forum. John got a correct set of exhaust headers from a member of the group, while the 0.040-inch oversize piston came from British Only Austria.

John took some "before" photos on March 12, 2015, and then got to work. First up was pre-fitting the fenders, using the two eBay fender blanks to make the hinged rear mudguard. Next, he mocked up the exhaust system, and then he took the AJS to pieces. John built his own wheels using stainless steel spokes from Central Wheel Components in the U.K. and rims from the Devon Rim Company. The hubs and rims were powder coated black, and he topped off the rolling stock with Mitas tires. The bearings and brake shoes are the original items, as they were in great shape.

John made all the fasteners, including the girder fork spindles and engine mounting hardware, on his lathe. He also made the footpegs, the footpeg shafts and spacers, and the brake pedal. Working in his garage John painted the frame, fork, front fender and primary cover. The rear fender and subframe, homemade rack, centerstand, chain guard and oil tank were all powder coated black. By July 11, just four months after he started, he had a rolling chassis.

The transmission was opened up and the gears were in good condition. New bearings were sourced from the Vintage Bearing Company in the U.K. while a speedometer drive was found at British Only Austria.

The 498cc engine was still on its original big-end bearings, and the bore was also standard. However, a piston circlip had come out and scored the cylinder wall, so to get rid of the resulting groove Mike Briggs at Performance Cycle and Auto in Calgary bored the barrel to accept the 0.040-inch oversize piston.

The cylinder head was treated to new valves, springs and keepers, and a replacement exhaust cam came out of Australia — an eBay find. John has a large ultrasonic cleaner in his garage and all of the aluminum cases spent time in the bath.

The engine went back together with new rollers in the big end, and the small end of the connecting rod was



fine. Roller bearings on the drive and timing side of the engine are off-the-shelf pieces from a local bearing supply store.

The oil pump was badly damaged, and all John had to work with were broken pieces of the pot-metal component. Using epoxy he glued the pieces together, using the result as a pattern to machine new parts out of brass.

Instead of a Lucas dynamo John elected to install an Alton generator, and he made his own wiring harness. The engine was put back in the frame on Sept. 8, 2015.

John's next task was repairing the gas tank, which was actually in pretty good condition. John made a replacement dash panel out of two pieces of sheet metal. The original panel was missing, but he used the shadow of an outline that remained on the tank top for the overall shape, and then worked from photos to get an accurate height. The panel houses a speedometer, amp gauge, clock and headlight switch.

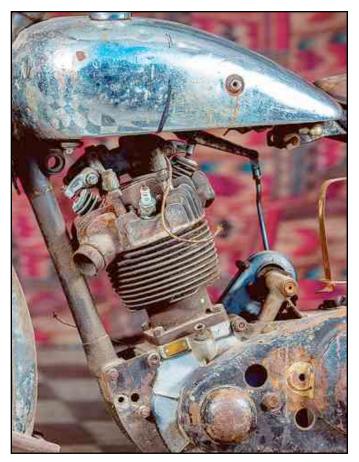
To prevent sticker shock John had been having his chrome done in batches, leaving the gas tank until last. In August 2015 when he dropped the tank at the platers the AJS was almost complete, but John didn't get the tank back until Oct. 30.

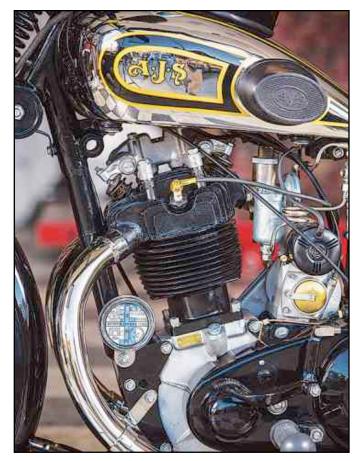
While a talented painter himself, John didn't attempt to spray the black over the chrome or apply the gold stripe by hand, instead turning the tank over to Guy St. Pierre of Cyclemania Art Works in Okotoks, Alberta. When the tank came back, though, John laid down the AJS waterslide decals.

On Dec. 19, 2015 — exactly one year to the day from when he picked up the AJS — John installed the last part, a copper fuel line he'd

formed, soldered and nickel-plated at home, and started up the AJS for the first time. Since then, he says, the AJS has been a one-kick starter, needing only a tickle of the carb and a bit of choke. John hasn't taken the AJS out on the road yet, but he has ridden it around the block, and he's working on dialing in the adjustable oil pump to deliver just enough oil so it doesn't accumulate in the crankcase. There is no scraper ring on the piston, only four compression rings, and in the AJS manual it says with the oil pump set correctly a blip of the throttle should see the engine emit a puff of smoke out the twin silencers.

John pulled off quite the accomplishment with his 1931 AJS. A rare machine, it was an unlikely internet barn find, and amazingly, it took him only one year to complete a stunning transformation. Job well done.





Vintage Motorcycle News





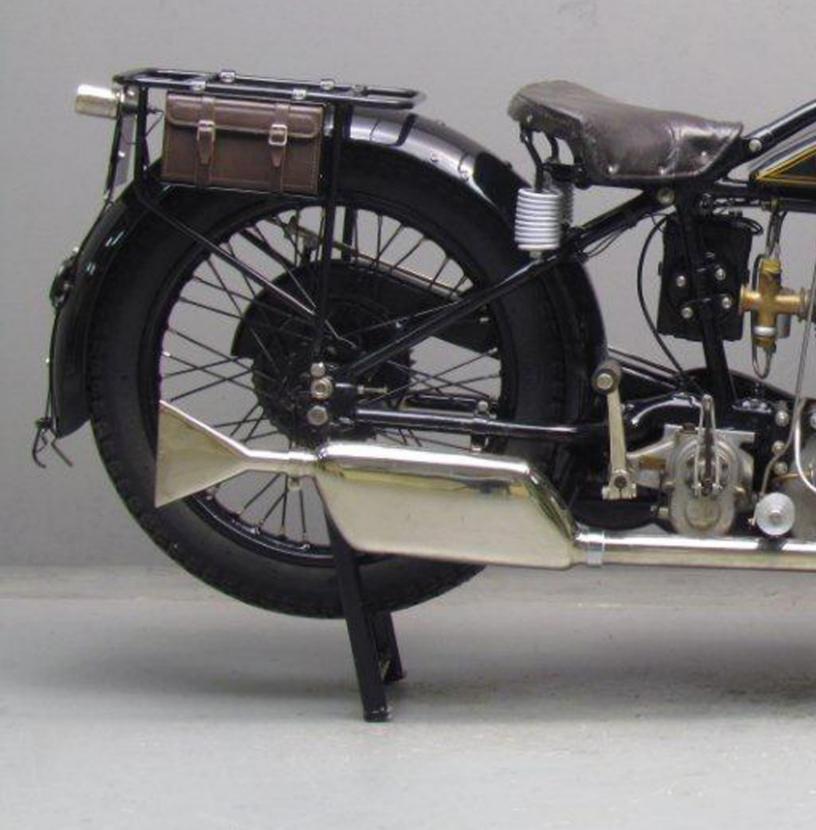
1928 AJS K7

150

and here



1928 AJS K9 500cc







1952 AJS Model 20 Spring Twin

<u>Engine</u>: 498cc air-cooled OHV parallel twin, 66mm x 72.8mm bore and stroke, 7:1 compression ratio, 29hp @ 6,800rpm

Top speed: 87mph

Carburetion: Single 1in Amal 76

<u>Transmission</u>: 4-speed Burman gearbox, chain final drive

<u>Electrics</u>: 6v, Lucas K2F magneto ignition

<u>Frame/wheelbase</u>: Steel tube cradle frame/55.25in (1,403mm)

<u>Suspension</u>: AMC Teledraulic fork front, dual shocks rear

<u>Brakes</u>: 7in (178mm) SLS drum front and rear

<u>Tires</u>: 3.25 x 19in front, 3.5in x 19in rear

Weight (dry): 394lb (179kg)

Fuel capacity/MPG: 4.5gal (17ltr)

Plumstead's Posh Parallel 1952 AJS Model 20

When Chief Designer Phil Walker started work on a parallel twin for Britain's Associated Motor Cycles, he seemed determined to better the competition.

By 1949, every major British motorcycle manufacturer had announced a parallel twin, including BSA, Ariel, Norton and Royal Enfield. (Velocette and Vincent, as usual, went their own way.) Edward Turner's Big Idea had become ubiquitous in the industry, and represented modern thinking and sporting performance. Suddenly, singles and V-twins looked stodgy and dated.

Compared with a single-cylinder 4-stroke of the same capacity,

power delivery was smoother, thanks to twice the power strokes for the same revs. That also allowed for lighter flywheels, so pickup was faster. Compared with a V-twin, parallel twins were more compact and typically lighter, too.

Stylishly late

Associated Motor Cycles (AMC), AJS and Matchless' parent company, had been focused on producing 350cc and 500cc singles, and arrived a few months late to the twin-cylinder party. No doubt AMC designer Phil Walker was aware of what the competition was doing, but his design for what would become the Matchless G9 and AJS Model 20 incorporated many unique features into the 2-cylinder format.

In addition to roller bearings at each end of the crankshaft. Walker added a center main shell bearing. All the other parallel twin makers followed Turner's lead, using only two mains. The third bearing gave extra support to the crankshaft and helped to prevent flexing. It also allowed feeding oil through the crankshaft to the two big-end bearings, providing an even supply for each. All other contemporary parallel twins fed oil from one end of the crank, creating the potential for the farther big-end bearing to be starved of oil — with the inevitable result. Another bonus: the center main bearing located the crank laterally, allowing it to "float" on the two outer roller main bearings during expansion and contraction.

Like Royal Enfield's designer Tony Wilson-Jones, Walker chose a massive one-piece iron crankshaft with integral counter weights rather than the bolt-up arrangement BSA, Triumph and Norton used. And like Enfield, Walker also opted for separate (interchangeable) iron cylinder barrels topped with light alloy cylinder heads. Under the alloy rocker covers were four eccentric rocker shafts: Adjusting the valve clearance required only a screwdriver once the pinch bolt was slackened. Walker also chose two separate oil pumps driven from the ends of the two camshafts - the exhaust operating the oil feed pump and the intake cam the return. Walker's engine was, as a British worker would say, a "proper iob."

Well appointed

Other features that made the AMC twin stand out from the crowd

included a bypass fabric filter in the return line to the oil tank (only Royal Enfield did likewise) and the absence of external oil lines, all the oilways being internal. Drive to the 4-speed Burman gearbox was by single-row chain and wet clutch housed inside AMC's pressed-steel "oil bath" chaincase.

The AMC twin used an all-new steel tube frame with a rear swingarm and AMC-made telescopic spring/shock units. These quickly gained the nickname "candlesticks" for their slender profile. Front suspension was by telescopic fork of AMC's own design, known as the Teledraulic.

The new twin was launched in 1949 as the Matchless G9 Super Clubman and the AJS Model 20 Spring Twin. The two motorcycles were identical except for the shape of the timing case, the fuel tank (the AJS tank held 4.5 U.S. gallons vs. 3.5 for the Matchless), seating (single seat and pillion pad for the AJS, "Dunlopillo" dual seat for the Matchless), and mufflers (megaphone style on the Matchless), as well as logos and paint. Power was quoted at 29 horsepower with a weight of around 400 pounds, although the AJS version was marginally lighter - and 3 British pounds cheaper at £209.

Like most new British cars and motorcycles at the time, initial production of the new twins was for export only. The U.K.'s economic situation in the immediate post-war years was dire, and the slogan "export or die" was widely quoted. The Model 20 wasn't generally available to British buyers until the 1951 model year, which saw the introduction of new squatter, fatter shocks, which became known as "Jampots." Though only fitted for six years, the Jampots became synonymous with AMC's motorcycles, and even lent their name to the AJS/Matchless Owners Club newsletter. They were replaced with conventional Girling units in 1957.

In 1951, a new alloy front brake hub was fitted, and the front fork internals were revised. A new Burman gearbox arrived in 1952, while a new dual seat arrived for both AJS and Matchless models in 1953. For 1954, a new full-width alloy single-leading-shoe front hub with cast iron brake drum arrived, with a similar unit fitted to the rear for 1955. Dual pilot lights were fitted to the headlight shell in the same year.

One of the major failings of the British motorcycle industry in general, and AMC in particular, was to underestimate the importance of the U.S. market. By the mid-1950s, it was already noticeable that home sales of full-size machines were falling, and U.S. sales were booming. Triumph's Edward Turner and James Leek, CEO of BSA, understood this: They had both produced 650cc parallel twins in the late 1940s with eyes on the American market and its hunger for more power and more speed. Royal Enfield upped the ante with its 700cc twin (sold in the U.S. as the Indian Trailblazer) in 1953. AMC was being left behind.

The 20B

In the early 1950s, offroad racing legend Frank Cooper was the U.S. Matchless/AJS distributor. His customers loved the lighter weight and compact size of British bikes, but were persistent in their demands for more capacity and more power. Cooper went as far as to create his own "big bore" Matchless G9 engine, increasing the bore by 3mm to 69mm for 545cc. He improved the oiling system to cope with the extra power (33 horsepower), then took the engine to London to try to persuade AMC to make it.

They declined, so Cooper went ahead on his own. New 1953 G9s and Model 20s were dismantled in Cooper's shop, bored to 550cc, and sold as the Cooper Sport Twin. The next year, the factory adopted

Cooper's approach, using modified engine cases for better lubrication and offering the bikes as the Matchless G9B and AJS Model 20B. Th e 550 was apparently offered through 1955, but by 1956 AMC had a bigger twin of its own: the 600cc G11/Model 30.

With the introduction of the 600cc and the arrival of the 650cc Model 31 in 1959, sales of the Model 20 declined, and it disappeared from the AMC catalog after

1960. Cooper was dropped as distributor in 1960, when AMC bought the Indian brand from Brockhouse Engineering. Norton distributor Berliner Corporation added Matchless and AJS to its portfolio in 1963, with the Indian brand being picked up by Floyd Clymer.

Chuck Thompson's 1952 AJS Model 20

It was the memory of riding a Model 20 as a teenager that made

Chuck Thompson of Gig Harbor, Washington, want to find another one.

The Ajay Chuck rode back then lived in the Thompson family tool shed for three years, the arrangement being that Chuck could ride it as long as he did the maintenance. "It was sort of inherited through a group of friends who basically didn't want their parents to know that they had purchased it," Chuck says. But the owners' visits became fewer. "At sound all its own, and the sound of the Amal carb sucking air and feeling the torque of this 'little beast' as you shifted through the gears."

The Ajay also taught Chuck a lot about working on British motorcycles. "If you're an English bike owner, you know what this means!" Chuck says. He also searched out books and manuals for the AJS, many of which he still owns today.

"Those are all a part of the

history of the bike ... everything that would be needed in conjunction with repair work, and it's been used quite extensively." Chuck found his present Model 20 on eBay in Australia around 2002, bought it, and had it shipped to the U.S. "It has been in restoration ever since it hit dry land," Chuck says, even though it had undergone renovation in Australia.

The Lucas K2F magneto had to be replaced, along with the

voltage regulator. The dynamo was rebuilt, a blown head gasket replaced, and a new carburetor fitted. Chuck kept meticulous notes of the work he did, and even devised a novel method of sealing the notoriously leaky "oil bath" primary cover. The rear wheel was out of alignment and the wiring harness needed a lot of repair, as well as the main headlight switch, which had to be rebuilt. "You don't just go out and buy another switch," Chuck says.



the end of the day, I was getting more use out of it than they were. My owner friend finally decided to pick the bike up and soon after he sold it."

Chuck had owned some smaller 2-stroke Harleys before, but says "to me, they weren't what cycling was all about." But the AJS was something else. "That was my dream bike. It had a tandem seat, so once you got on the bike it felt like you were sitting on a horse saddle. The throaty mufflers provided a A replacement dual seat came from Walridge Motors, as did a set of running lights for each side of the headlamp. Shrouds were missing from the Jampot rear shocks, so new items were sourced from a local maker. And although the gas tank was dent free, Chuck decided to have it repainted and pinstriped. The front fender was in "bad shape," and was powder coated. Chuck says his restoration was aided by several local enthusiasts, who helped out with parts and services.

Since getting the Model 20 up to his standard of finish, Chuck sticks to a fastidious detailing routine that can have him spend two or three hours just on the front of the bike, including cleaning spokes and rims. The Ajay gets started at least once a week in winter, and has to pass a checklist of all its functions before being put away! "It gets manicured pretty thoroughly at least once a month," Chuck says.

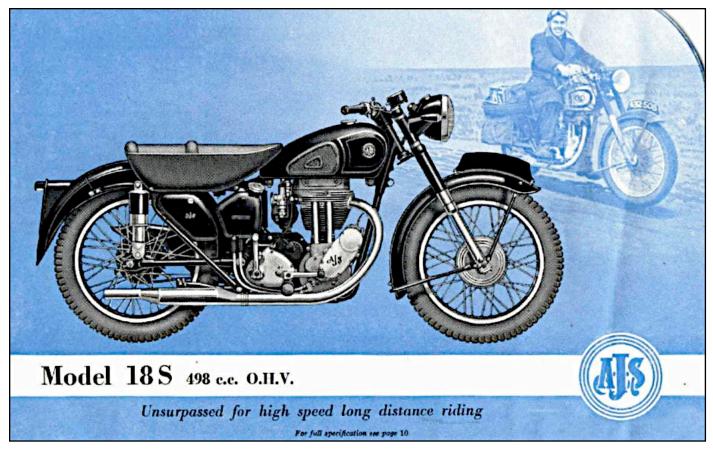
Saddle up

So what's the Model 20 like to ride? "It feels like you just got on the saddle of a horse," Chuck says, "particularly with that tandem seat. You don't just get on and ride. It's not a lightweight in the sense that you've got to watch when you start it. You've got to pay attention.

"These bikes were never designed for interstate highways; 45 or 50 miles per hour, that's about how fast you wanted to go because the bike would vibrate too much. I try to protect the bike in keeping it away from traffic as much as possible." Chuck also finds the period brakes reluctant to stop the bike. "You have to downshift in most instances and plan to stop as opposed to just stopping!"

Chuck notes with pride that the Barber Museum, the largest vintage motorcycle museum in the U.S., does not have a Model 20. "This is something that is scarce," he says. "There are very few left out there." He's offered to loan it to the museum, but Barber doesn't borrow bikes, preferring to own them outright. Chuck is reluctant to part with the Model 20 right now, intending eventually to pass it along to his son.

One story Chuck likes to tell: Riding back from his local hardware store one time, he realized he was being followed by a truck. After several maneuvers to try to get the truck to pass him, Chuck pulled into a subdivision and stopped. The truck did the same. The driver admitted he just wanted to listen to the Ajay: "I didn't see the bike but I heard it." The driver claimed he could tell it was a Model 20 by the exhaust note. "This particular bike has somewhat of a personality," Chuck says. "It sounds different from a BSA, a Triumph. It has a sound all of its own." MC







A 250 which needs work will go for under £1500 via online from the stable of A-J-S auction, while a ready to ride,

Not all old British bikes have to cost a fortune. In fact, the AIS and Matchless 250 and 350 lightweight singles are still enticingly affordable. 'But aren't they also actually awful?' you may ask, and Rowena Hoseason has some answers...

There is one segment of classic society which remains stalwartly sensible when it comes to cost. That's because the Associated Motor Cycles (AMC) range of four-stroke singles wasn't wildly popular when new and has suffered half a century of bad publicity ever since.

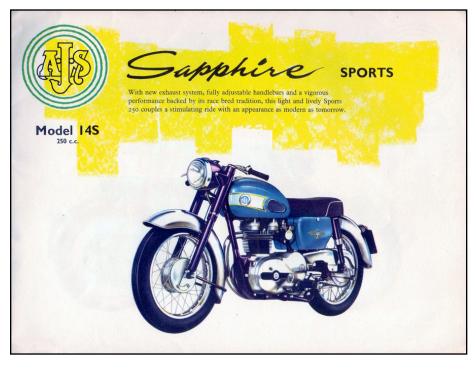
The AJS and Matchless Buyer's Guide says that the 250 model was "a disappointment to both its makers and its riders' while the 350s were 'dull and pedestrian... a commercial failure and of very limited appeal."

Matchless G5

So it's no wonder that the AMC lightweight singles, the G2 and G5 Matchless models and AJS Models 14 and 8, didn't initially set the classic world on fire.

But life as a classic bike is a lot less demanding than being thrashed by a teenage tearaway. As with Norton lightweight twins, the AMC lightweight singles can be improved with modern electrics and sensible maintenance. As a result, they've been gaining something of a modest following of late.

Hence prices have risen in recent years. Even so, their costs started from a low level and still sit in that convenient 'matured ISA' price niche.



well-fettled 350 with an MoT should set you back between £2500 and £3500 depending on whether you buy privately or from the trade. The small ads aren't crammed with examples for sale, but if you keep looking for a couple of months then you should spot one in average condition for less than three grand.

Very smart examples of the final AJS Model 14 CSR 250 fetch as much as earlier 350s, reflecting their sporty performance and the fact that the bike had been reasonably de-snagged by 1965. You might also spot an occasional 350 offered for sale at an extraordinary price, over £4000. It would need to be gold-plated to be worth that much. Still, god loves a trier.

1965 AJS Model 14 Sapphire the 250

If you can wield a wrench and don't mind taking a few risks then traditional auctions often turn up bargains. AMC lightweights often crop up among the early lots, and they attract very few bids from the upmarket buyers who waiting to spend their pension funds on a Manx, Goldie or Shadow.

These lightweights do come with their own catalogue of compromises however, so it's probably best to let you know the worst in advance. Like many learner and low-capacity machines they were subjected to hard use back in the day and will have been hacked around ever since. There are few people who'd consider spending £5000 on a top notch restoration of a G2, so many have been subjected to a lifetime of penny-pinching make-do and mend.

Beware the bike which has been brutalised by the man who wields big hammers... it's probably changed hands half a dozen times in the last decade. That's because no one likes it and (unless you're going to rebuild it from the ground up) you probably won't like it either and it'll cement any half-formed opinion about these bikes being suitable only for scrap. Look for one instead which has found long-term sanctuary with an enthusiast owner who has been happy to tinker with it and has a whole pile of spares to pass on, too.

The very first 250s of 1958 suffered from big end failure but this was quickly remedied by the factory and you'd have to be the unluckiest person on the planet to fall foul of that flaw now (unless you travel everywhere at 80mph and never top up the oil, of course).

AJS Model 8: the 350

A certain amount of lube leakage is inevitable, and we know of baffling 'seepage' from one 250 which was eventually traced to a porous barrel. Chris Read, former editor of The Jampot, has owned more than one of these wee beasts, and also suggests that the 'timed engine



breather was a bit over exuberant... oiling the rear chain and preventing any chance of rust forming at the back of the bike!'

The early front brake (snaffled from the Francis-Barnett range along with the forks) on the 250 was considered 'adequate' for 1950s traffic which means I'd consider it 'optimistic' for today's ABS-equipped affray. Steven Surby of AMC Classic Spares shares my concerns about the whole front end: 'the Francis Barnett/James forks fitted to the standard 250s scare me but maybe some owners like living on the edge!'

The wheels on standard 250s are 17-inchers so your tyre choice will be fairly restricted. The very long Girling shocks are now hard to find but the original items can be refurbished and re-filled.

The oil tank is tucked away on the right-hand crankcase wall and hidden behind a shiny outer engine cover, so its scanty 2.5 pints of lube don't benefit from much in the way of cool air flow. Overheating would be an issue if you regularly ride in hot weather (not in the UK then...) in urban traffic. From the outside, the engine and gearbox appear to be one unit but they aren't; it's another shiny cover disguising the separate entities which makes these machines rather more tricky to work on and rather less neat and tidy than BSA-Triumphs unit construction alternatives.

To adjust the primary chain you rotate the gearbox; interesting for folks of a technical bent, but this arrangement also means that the actual clusters sit rather high in the box and can be affected by lack of oil if the three-pint box isn't kept topped up to combat the inevitable



leak. Third gear (and the owner) will whine if they've been run dry.

To fix these kind of problems you will inevitably need replacement components, and here we consulted Steven Surby of AMC Classic Spares again. He initially sounded very positive; 'they're nice little bikes to ride ...' but then burst my balloon with; 'but awful when it comes to parts. Although they all look pretty much the same, there were a multitude of changes with the different models, year after year. All of these changes are badly documented in the spares lists, which are poorly illustrated, so the part numbers are rendered meaningless. It is much harder to find good spares, especially tinware, than it is for older Heavyweight equivalents.

'The numerous changes mean that there's very little interchangeability with parts. For example there are four or five different mainshafts and of course the different mainshafts have a knock-on effect on the clutch, etc. Similarly, if fork sliders need replacing, don't assume that the virtually identical and more commonly available sliders from the Heavyweights are interchangeable – they're not because the wheel spindle is 1/16" bigger on the Lightweights and can lead to cracked slider or worse.'

There was also much grumbling in old road tests about wobbly Wico-Pacy 6-Volt electrics but previous owner Chris Read reckons the 'lighting and ignition were good. WIPAC alternator rotors held (still hold) their magnetism far better than their Lucas counterparts, but on original machines there was a dreadful voltage sink that took the form of a length of resistance wire in the loom running up the crossbar under the fuel tank. The idea was that this would sink out excess power from the alternator when the lights were not being used in daytime. It did, but also frequently melted and the battery boiled!'

The cure for this is modern tricknology in the shape of electronic ignition which Chris says 'really makes the engine GO.' You'll also need a 12V conversion; 'easily achieved with the original WIPAC alternator and Boyer Power Box.' These machines are physically compact and modest in their performance, so they don't really suit stout chaps of six foot tall. But such Real Men have plenty of other old bikes to choose from...

...whereas, there are plenty of classic bike riders like meself who appreciate a lower, lighter machine which doesn't need a tactical nuke to start from cold. The AMC 250s and 350s are low, light and easy to fire up. Although Steve Surby reckons they are 'one of the heaviest Lightweights ever made' he also explains that 'they are pretty deceptive because most of the weight is carried so low, they give the impression of lightness. They're certainly easy to kick over (even the high compression CSRs) and very compact in size, so they do suit someone shorter in stature or those who find Heavyweights just a bit too heavy. My girlfriend actually shed tears when we sold our G2. I keep telling her our Model 8 is a better bike but she had developed an emotional attachment...'

The AMC lightweights steer very well – the CSR is 'exceptionally good' says Chris Read — and offer a proper, big bike riding position. They combine the look, feel and acoustics of the archetypal Brit four-stroke single with the ease of use of a two-stroke tiddler. The CSR versions even got a full-width British Hub front brake which Chris Read describes as 'altogether better' than the earlier equipment.

AMC lightweights are not exactly slow, either. The CSR versions of the 250 would achieve 75mph although a kind man would consider cruising at 60mph more reasonable these days. If you are a speed-crazed maniac then look for a 1965 vintage 'Ninety' which boasted a compression ratio raised to 9.5:1 (it was 7.8:1 back in 1959) and closer ratio gears for an 83mph ultimate velocity. Not bad for a 250, and the bigger siblings are even better according to Chris Read: 'They're hugely powerful for a 350 and quite capable of keeping up with the big twins once up to

speed on the open road. I had one keep up with me for about 25 miles at 75mph whilst I was riding a 650 twin on the A4!'

AMC lightweights are technically interesting for folks who like understanding their engines, but considerably less complex than Norton's twin solution to the same conundrum. The AMC singles are more robust and charismatic than, say, a C15, and less stressed and vibratory than many little 'uns. Chris Read reckons the clutch on his last one was 'light' while the 'gearbox was sweet and very positive... and engine very eager.'

So overall, as Chris says, these bikes are 'very underrated; very competent, with generally very good reliability.'

Plus – as I might have mentioned before – they're extremely good value. Or at least they were extremely good value, until I started talking about it in public!



AJS ANECDOTES

Riding a motorcycle at night can be rather lonely, says Greg Powell. Here are two experiences that he recalls from many years ago, one natural and the other (almost) supernatural...

One winter evening, I rode my AJS 18 over to Ross-on-Wye to visit my friend Alan. After a pleasant few hours and the disposal of several pints of Newcastle Brown (well, it was the 1970s), it was time to ride the twenty miles home.

Accelerating out of town I became aware of a low moaning sound that became louder as my speed increased. When I slowed down it disappeared and only re-started at around 20mph, in any gear. The fact that it was independent of engine speed suggested trouble in the gearbox area.

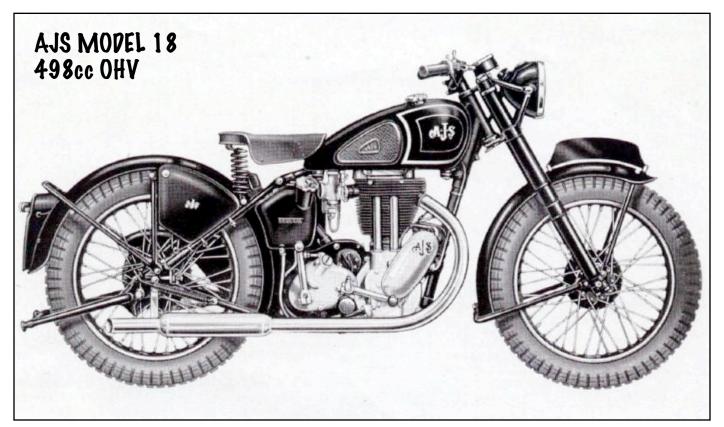
Assuming a bearing was on its way out, I completed the entire journey at 15-20mph, with the aim of delaying the expected scream of its demise. Luckily it was late and there was only the occasional vehicle coming up behind me. I eventually arrived home very cold and depressed by the thought of having to take the box out and the subsequent expense, not to mention the task of making the primary chain case leak-proof again.

As I hung up my jacket, the cause of the trouble was revealed. Each pocket contained two empty beer bottles. The noise had been the wind blowing over their necks! Nature must have been looking after me by limiting my speed. Any half-sober person wouldn't have set out on a ride with his pockets full of glass bottles, would he?

The second event was when I was riding my 1936 250 Ajay late at night through the Forest of Dean. This was a rather creepy place at the best of times, not improved much by Mr Lucas' efforts. It was very dark and no other vehicle was about. I started pondering what would be the most scary thing that could happen. A ghostly figure in my headlight perhaps? After some pondering, I came to the conclusion that it would be feeling a hand on my shoulder and not being able to turn around.

A few minutes later I was still wondering what my reaction would be in the unlikely event of such a thing happening... when a cold, bony hand contacted the back of my right leg and remained there as I moved it. I soon found out the reaction – hair standing on end, blind panic!

Slowing rapidly and looking down as soon as I dared, I found that the toolbox fallen open, allowing the lid to hinge open against my leg. Not at all supernatural, but what was the chance of that happening just after my thoughts? It had never done it before and never did again. I was rather glad to get out of the woods that night...





Engine: 350cc air-cooled OHV 4-stroke single, 72mm x 85.5mm, 9:1 compression ratio, 18hp @ 5,750rpm Top speed: 78mph (claimed) Carburetion: Single Amal Monobloc 389 1-1/8in Transmission: Chain primary, wet multiplate clutch, 4-speed AMC gearbox Ignition: 12v (6v stock), coil and breaker points Frame/wheelbase: Duplex full cradle frame/56in (1,422 mm)Suspension: Norton Roadholder forks front, dual Girling shocks rear Brakes: 8in (203mm) Norton TLS drum (Norton SLS stock) front, 7in (178mm) Norton SLS drum rear Tires: 3.25 x 18in front and rear Weight (wet): 420lb (190.5kg) Fuel capacity/MPG: 5gal (19ltr)/67mpg (est.) Price then/now: n/a/\$1,500-\$6,500

If there's a perfect embodiment of the decline, collapse and demise of the British motorcycle industry, the AJS Model 16 could be it.

That's not to say it was a bad motorcycle. Based on sound technology and refined over decades, this classic British 350cc single represents everything that was both good and bad about British bikes of the 1960s. It was solid, strong and reliable with a storied heritage steeped in motocross and trials victories. But it was also a 30-year-old design in a market that was turning over every couple of years.

For example: in 1965, for pretty much the same money as the 18 horsepower AJS, you could buy a 28 horsepower 305cc Honda CB77 that would top out at over "the ton," where the A-jay was all done at 78mph. In addition, the Honda had carefree electrics and a twin leading shoe front brake. It was also 30 pounds lighter — and it even had electric start! But traditional British singles have a timeless charm; heavy flywheels and an overbuilt chassis combine with muted mechanical noise and sonorous, thumping exhaust to provide steady, smooth progress, all while evoking an era that was altogether more sedate.

Not dead yet

In 1931, motorcycle manufacturer AJ Stevens & Co, owner of the AJS brand, went broke. But the company also made a broad range of respected motorcycles and had a history of racing success. Enter the Collier Brothers of London, makers of Matchless motorcycles. The Colliers bought the brand and the assets, and continued to sell motorcycles under both names.



Initially each brand used different designs, but before long the two ranges started to overlap, especially after 1935. In that year, the similar 348cc Matchless G3 and AJS Model 16 were introduced; and from 1938 the G3 adopted a new frame borrowed from the Model 16. In the same year, the parent company changed its name to Associated Motorcycles.

Then World War II loomed, and like other bike makers, AMC offered military versions of the G3 and Model 16. BSA, Norton and Triumph had the inside track on supply, but after the Triumph factory was destroyed in the Coventry air raid of November 1940, AMC was called on to fill the gap.

It's reported that AMC had supplied 80,000 350cc singles by the end of hostilities. Badged as a Matchless, the 348cc single became the forces' choice, especially after the girder front fork G3 was replaced by the lighter, telescopic fork G3/L.

Civvy Street

After the return to peace, AMC was quickly able to offer repainted G3/Ls as civilian models, pending the introduction of a new range of 350 and 500cc machines in 1946. These were all based on the G3/L and badged



either as AJS or Matchless, though they were all built on the same production line at the Matchless factory in Plumstead, London. The principal difference between the brands — the position of the magneto, either in front of the cylinder (AJS) or behind it (Matchless). All shared the same stroke of 93mm, with 69mm bore for the 350s and 82.5mm for the 500s. The 350 was either G3/L or Model 16, the 500s were G80 or Model 18.

All the engines had vertically split crankcases and a built-up bottom end, the crankpin being a taper fit into the flywheels. The crank ran on a combination of two ball races on the drive side and bush/roller on the timing side, while the one-piece connecting rod ran on roller bearings. Two separate cams operated the valves by means of pushrods inside external tubes, with coil spring return. Engine lubrication was by an unusual worm-drive rotating plunger pump, while the notoriously leaky pressed-steel primary case took care of external oiling! The single-row chain primary drove a wet multiplate clutch feeding a 4-speed Burman gearbox. Electrics were 6-volt and fueling was by a standard Amal carburetor. The first post-World War II chassis was rigid at the rear, while the front suspension used AMC's own Teledraulic fork.



Amal Monobloc carb arrived in 1955

AMC gearbox arrived in 1956.



Vintage Motorcycle News



The centerstand is more reliable at keeping the Model 16 upright than the kickstand!

Two major changes arrived for 1948: Inside the cylinder head, hairpin valve springs replaced the coil type; and swinging fork rear suspension became an option. A pair of coil-spring/damper units controlled swingarm travel, their slender dimensions earning the nickname "candlesticks." These were replaced in 1951 with fatter units having more oil capacity, known colloquially as "jampots." And a light alloy cylinder head replaced the cast iron item. In fact, all through their production, AMC singles benefited from upgrades that had been tested on competition Models — which is as it should be!

The 1952 Models are distinguishable by their lack of nickel/chrome plating, a result of the Korean War; and both brands positioned the magneto ahead of the cylinder. This was a boon to Matchless owners, the generator previously being buried under the magneto, and generator maintenance necessitated time-consuming removal of the timing cover — which also meant losing the timing settings.



Straight-on shot shows how slender the Model 16 is. Tires are modern Avon Roadriders.

A dual seat replaced the single saddle in 1953, and an Amal 376 Monobloc of 1-1/16-inch diameter was fitted for 1955. In 1956, AMC's own 4-speed gearbox replaced the Burman item; and in '57, proprietary Girling shocks replaced the jampots. Alternator electrics arrived for 1958, displacing the magneto though purists decried the move, and the engine did look rather naked without it. But it did provide the opportunity to replace the pressed steel primary case with a less-leaky cast alloy one. And a new duplex frame arrived in 1960.

More changes

Around this time, the process of rationalizing the AJS/Matchless/Norton ranges accelerated. (AMC had purchased Norton in 1952.) First the Model 16's Teledraulic fork was swapped out for a Norton Roadholder in 1964, while Norton items replaced the front and rear hubs. That meant the Norton 8-inch full width front brake — an improvement on the previous item, though not by much. A new shorter-stroke engine was installed based on the 350 competition model with



72mm x 85.5mm bore and stroke. This meant the pushrod tubes disappeared, with the pushrods now running in tunnels inside the head and barrel castings. At the same time a Norton gear-type oil pump replaced the plunger. This was the last version of the AJS/Matchless singles, of which Derek Smith's bike featured here is a prime example.

And in the ultimate insult: for 1965-1966, Matchless G3s and AJS Model 16s were also re-badged as Norton ES2 and Model 50 MkIIs. Production of street-model AJS, Matchless and "Norton" singles ended with the collapse of AMC in 1966.

Derek Smith's AJS

Motorcycles have been a central part of Derek Smith's life since he was old enough to ride, earning his street license at 16 on a 250cc BSA C10L. Unlike the more usual parental disapproval, it was Derek's mother who suggested he get a motorcycle, influenced by happy childhood memories of riding with her parents in a sidecar outfit in England.

After the C10 came a 650 Golden Flash, a Honda four, a BSA Spitfire and Firebird; but singles were always

Derek's first choice. "I've always been a singles fan," he says.

Derek later worked for motorcycle dealer Deeley's in Vancouver while riding offroad in his time off, eventually getting sponsored rides on a BSA Victor 500 in motocross and enduro events. So how did an ex-racer end up with the mild-mannered AJS?

Derek found his 1965 AJS Model 16 in a friend's unheated basement, where it had been for a decade.

"It was a sad sight," Derek says. "The forks and rims were rusted, the brake adjusters were out to the ends, the tank badges were cracked, a piece of nylon stocking was zip strapped over the carb as an air filter. That was in April of 2012."

"I recognized the AJS as being a rare bike in Canada as soon as I saw it."

That said, Derek was unwilling to pay the asking price at first and sat on the idea for a year until he began to appreciate AJS singles and realized their value. And the A-jay was mostly complete, including the tinware. It was also a 1965 model, meaning it had the later

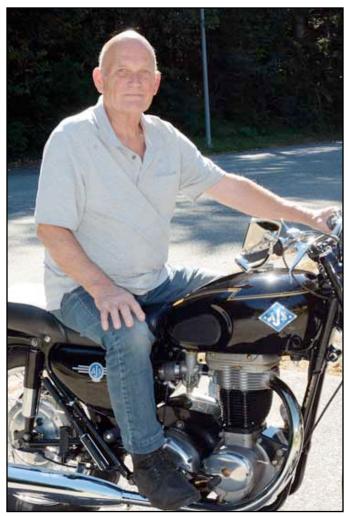


Without a magneto, the engine looked naked to AJS purists.

alternator engine with buried pushrod tubes, Roadholder fork and Norton brakes and hubs. And while the use of Norton parts was controversial at the time, the last AMC "heavyweight" singles were probably the most durable and reliable.

"So I went back and gave him the asking price," says Derek.

Owner Derek Smith and his AJS.



Derek brought the AJS home with the intention of getting it running and riding it. But after some preliminary investigation, he realized it would take a lot of specialized work. So he took it to Kevin Wilson at International Classic Motorcycles in Coombs, British Columbia.

"My initial thinking to take it to Kevin was to go through the engine and transmission mechanically, check the brakes, and we could leave it at that."

But about a week later, Kevin phoned to report that the gas tank was rusted inside and needed sealing and coating. And with the best will in the world, Kevin couldn't promise to keep the paint-dissolving sealing chemicals off the outside of the gas tank. That would mean fresh paint. Kevin also wanted to replace the rusted wheel rims and spokes "with stainless steel and good English chromed rims."

There were other differences over the restoration: Derek suggested a switch to 12-volt electrics:

"I suggested it to Kevin, because he told me the coil had been squashed, overtightened." That meant it would need to be replaced.

"And I said, 'Well, you might as well go to 12 volts.' And he looked at me with a stern face and said, 'What for?' So I said, 'All right. Okay.""

By this time, the estimate for the work required was close to what a concours restoration would cost. So that's what the AJS got. Fortunately, most of the parts were either restorable or available from AMC specialists like Walridge Motors in London, Ontario, Canada (<u>www.walridge.com</u>). And while the restored bike is as close to stock as possible, the single-leading-shoe Norton front brake was replaced with a later twin leading shoe item. Derek considers the original SLS brake as no more effective than that on a Yamaha DT1.

"And those are not very good brakes for a reason. It's a dirt bike!" he says.

Derek is reluctant to point out any other faults with the Model 16, except one: "I respect it for what it is. But I guess the only thing that doesn't work very well is the side stand."

On his first ride after the restoration, Derek parked the AJS on a neighbor's driveway that had a slight downhill slope. As he was dismounting, the AJS rolled forward on the sidestand. "I caught it before it hit the ground.

Vintage Motorcycle News

But it was that close," he says. Now he only ever parks it on the centerstand.

Derek has entered the AJS in the local Squamish Motorcycle Festival three times and won "best classic motorcycle" each time against more than 50 other bikes.

Model 16 in context

Derek Smith's 1965 AJS 350 is one of the last of the AMC singles, which makes it particularly rare and not necessarily less desirable — though that wasn't the case when it was produced. As well as being a bit of a dinosaur, the crossover of components and badges from Norton, AJS and Matchless pleased none of the fans of any of those brands and offended most of them.

That said, it is arguable that the last of the AMC heavyweight singles were the best. The engine was pretty much bulletproof with race-style hairpin valve springs and a solid bottom end that benefited from components used in the competition Models. The AMC gearbox (as used later on the Commando) was sturdy and silky in operation; the Roadholder fork was the best in the business at the time; and the 8-inch Norton brake was best of what was available.

The AJS Model 16 was a rugged, reliable and durable motorcycle with few vices — other than hauling all the weight of the 500cc Model 18 with only two-thirds the power! MC

Resources

UK AJS & Matchless Owners Club AJS club North American Section

The AJS in the Field



I swear this story is true, though sometimes I have trouble believing it myself. Walking home from junior high with a couple of buddies, we spied an AJS 350 leaning in the hedgerow beside a farmer's field, apparently abandoned. The question: Would it start? We pulled it from the hedge, and one of our more adventurous friends lunged on the starter pedal. A steady exhaust beat answered the question. One kid who had ridden his older brother's bike hopped on and was soon chugging around the field. Then came my first ride on a real motorcycle. The exhilaration of bouncing along the dirt path and shifting gears with the engine thumping willingly below is seared into my memory, and an obsession seeded. Of course, the AJS eventually ran out of gas. We pushed it back into the hedge, obscuring it as much as possible. But when we reconvened with a can of gas, the A-jay was gone. Of course. — Robert Smith

What really killed the British motorcycle industry?

In his book The Strange Death of the British Motorcycle Industry, Dr. Steve Koerner points to three phases of decline: During the 1930s' depression, with its demand for cheap transportation, most British manufacturers were still producing expensive motorcycles for enthusiasts. In the immediate post-World War II period, they also failed to respond to the opportunity for mass production of commuter-style mopeds and scooters (For example, between 1946 and 1968, BSA built around 500,000 Bantams, while Vespa alone built close to four million scooters!) And having eschewed serious mass production, the British industry was unable to respond to the influx of small Japanese bikes in the Sixties.

Ultimately, the major failure of the industry was that rather than create new products to fulfill the demands of the changing marketplace, British manufacturers continually sought new opportunities to sell its premier products - superannuated, high-capacity singles and twins. Eventually, the only market left was the U.S., and the industry had all its eggs in that one basket. And while British bikes still sold well in the U.S. until 1970, BSA-Triumph hit the wall by missing the critical U.S. sales season in 1971-1972 around the oil-in-frame fiasco, allowing the Honda 750 to grab their market. The bankrupt BSA-Triumph was taken over by Norton-Villiers, makers of the Commando, in 1973. The new company, NVT soldiered on for a couple more years before owner Dennis Poore pulled the plug in 1975. — Robert Smith



1954 and 1955 ex works ISDT AJS spend retirement on warm dusty trails in Oz

I was very pleased when Australian reader Patrick Horton, who has provided the most delightful photo we have above, made contact to say:

"I own Hugh Viney's 1955 ISDT AJS. He never got to compete in the 1955 event as he was knocked off the bike in Earls Court on the way to a selection meeting. It left him with a broken leg and a vacancy in the British team that was taken up by Gordon Jackson."

Never resisting the opportunity to be cheeky I encouraged him for photographic proof and was even more surprised to get this reply

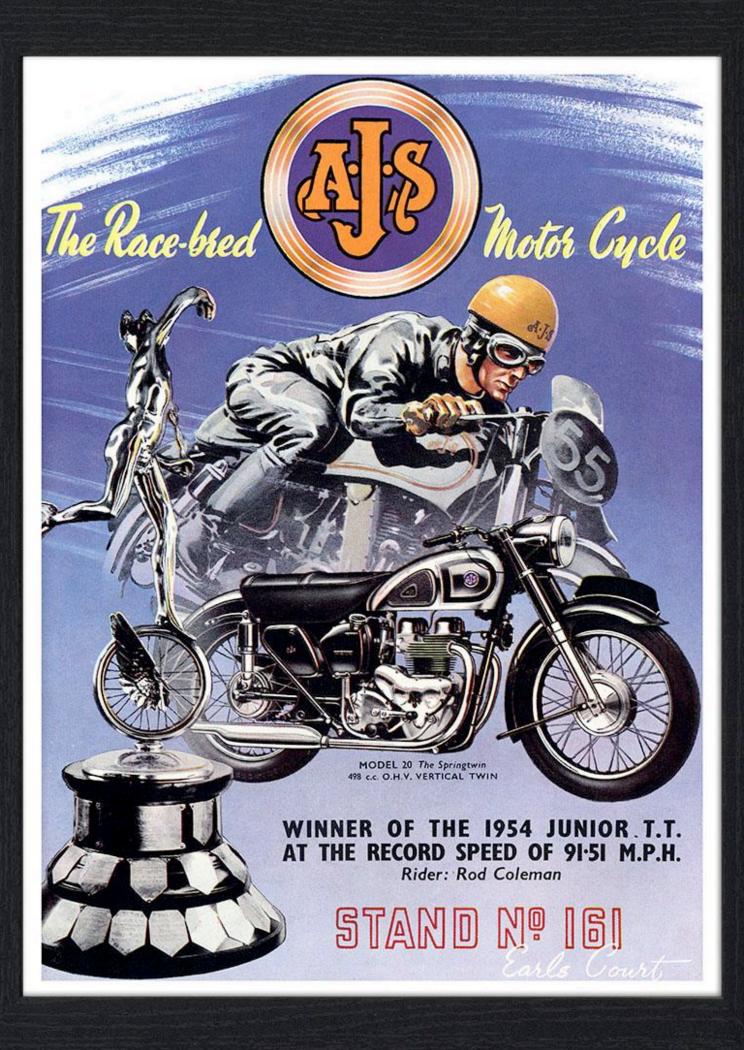
"Last weekend I went to visit the current owner of Les Sheehan's 1954 AJS ISDT twin which is still in near-original condition. I had my 1955 machine with me and I have a photograph of both which I'd put up here but I can't see a way to attach a photo to this comment. After seeing the owner I also went to visit Les Sheehan who lives nearby. There can't be many ISDT riders of the '50s left.

When Viney got knocked off his bike it was returned to the factory and sold to someone Jock West knew. The special bits were taken off and presumably put on the replacement bike ridden by Gordon Jackson. So bits of the bike photographed above originally belonged on my bike. Could I ask for them back??!!!!"

This amazing unexpected coincidence has not only revealed two of the ex ISDT AJS bikes from the mid fifties finally gave up the damp cold and emigrated to enjoy a happy retirement riding on the warm dusty trails of the outback of Australia but one of their riders, Les Sheehan, remains alive and well and living nearby... a heart warming tale for what is today a snowy day in North Wales. I for one must say to be able to wake up then start up either of those bikes and go out on a ride sans rain, cold, or barbour jacket under blue skies must make Patrick one of the luckiest persons I have ever come across. Here's to hundreds of more miles of good riding to come Partick.

As we do not have any pictures of Les on the site, having looked him up on Google there was not much available but a request on an Australian Motorcycle site by his daughter Marilyn Quirk indicates he was the Western Australia Scrambles champ in 1956 so he must have emigrated shortly after the time of his ISDT appearance. I would be grateful for any offers of images of him and especially on this AJS.

Vintage Motorcycle News



1951 AJS Model 18s

ajs

1951 AJS 7R Boy Racer



1960 AJS 31

Barn Find

Rare AJS Model 37/2 Found In English Barn: Sort OfMike Botan / @Ride2ADVSource: advrider.com

We've all heard of "Barn Finds".

You know, those cars/bikes that are found stored in some remote barn. Someone once loved the machines but for one reason or another, it was forgotten.

Well, there's a new barn find and just went up for auction July 6,

fetching a significant £25,000 (~\$31,000).

This particular find is a pre-war 1937 AJS Model 37/2

It's a 990cc v-twin powered machine and is one of only 15 surviving examples.

Detailed history

The story about the find is particularly interesting. There's a detailed history of the bike's life. It was first registered in 1937 with a sidecar attached. Then in 1941 Frank Smith of Kirkburton registered it.





A front view of the fully restored AJS Model 37/2. Photo credit: Spicer Auctions.

Later, in 1953 Peter Hanson of Huddersfield became the registered owner. Next was Jack Wheeler of Batley a few months later and then Benjamin Rhodes of Scarborough in 1965. But in 1966, the final registered owner, Edward Reed, again of Scarborough took possession.

Found in a barn



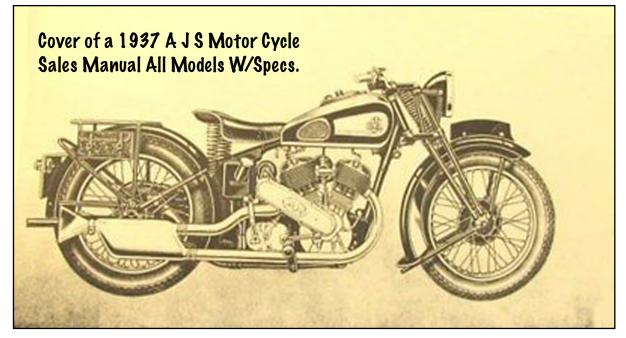
A view of the AJS Model 37/2 990cc V-twin engine. Photo credit: Spicer Auctions

Reed used it for a year and parked it in a barn that had an underlying inspection pit. The bike was lost to the barn's inspection pit when the flooring collapsed. It remained covered by broken planks, an old refrigerator, and other garage junk.

In 2018 a company hired to clean up the mess and drop everything off at the dump noticed the bike's taillight sticking out of the debris. A digging company extricated the bike from the bowels of the pit.

Easily restored

Amazingly, the bike was in very good condition. An engineer restored the bike. The restoration was simple. Everything was complete and the most significant damage was a single minor dent to the mudguard.



WHAT HAPPENED TO THIS MUCH-TRAVELLED AJS?

By Sam Hewitt

Mark Gooding tells the story of his late father-in-law's 1952 350cc AJS, OMA 859, now thought to be fitted with a 500cc engine, and wonders if any VMN reader can help him trace its whereabouts.

Sadly my father-in-law Graham died last year. I knew him for 30 years, and in that time he recounted many a tale of himself and his then future wife Jean riding his 1952 350cc AJS around Europe.

During the clear-out of the mountain of paperwork and photographs, my mother-in-law found two images, one showing Graham on London's Tower Bridge (they lived in Ealing during the early 1950s) and the other showing my mother-in-law in Italy. She even made her own blouse, being a textiles, or sewing, teacher at the local high school.

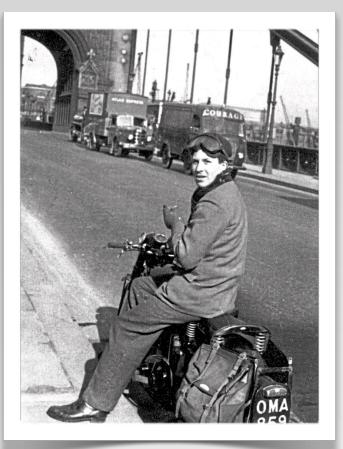
Graham's father bought him the bike, but when Graham asked: "Why can't I have a 500cc AJS?" his father replied: "350cc is big enough for anyone" – a bit rich coming from a man who bought a brand new JAP-engined Brough Superior SS100 and sidecar in 1936!

Source: oldbikemart.co.uk

So, it was to be the 350 Ajay. Graham, whose cousin worked for the AA at the time, was asked to test the new Silver City service that flew from Lydd to Le Touquet in France using the Bristol Super Freighter whose front opened up to let the cars or bikes in. In fact he flew out three times between 1953 and 1955. The trip cost £10 per person and bike each way

Graham and Jean went to Italy on the AJS, eventually travelling down to Sicily. Graham took along spare parts, including inner tubes and piston rings, and the stuff to do an oil change when required.

He even stopped half-way up a mountain to do the oil change as the milometer had just gone past service time. He also pushed his bike a few miles, in his motorcycle gear, just to get to a proper Shell petrol station rather than use the fuel from an ARAL station which he had never heard of.



Note the sparse traffic on London's Tower Bridge in the early 1950s as the writer's late father-in-law, Graham, is pictured on his 350cc AJS.



Happy memories are made of pictures like this as, with the AJS standing safely on its centre stand, Jean poses for the camera during one of the Italian adventures.

It just goes to show the faith people had in good engineering; so long as the bike was looked after, it did what it was designed for.

This journey was repeated a few more times, just the two of them riding to Italy in the mid-1950s. The reception they got from the guest houses is hard to believe now. The bike was guest of honour and it was brought through the house to the back yard for safe keeping.

During one journey they

had piston problems and the local mechanic made a new piston overnight. When asked if he would need the piston rings that Graham had brought, the reply was an emphatic: *"No, I make my own,"* and the bike was ready to go the very next morning.

Later, in 1957, when the bike was taken to Plumstead for repair work, they asked, holding the Italian piston aloft: *"What the heck is this?"* (or similar words befitting a south-Londoner!).

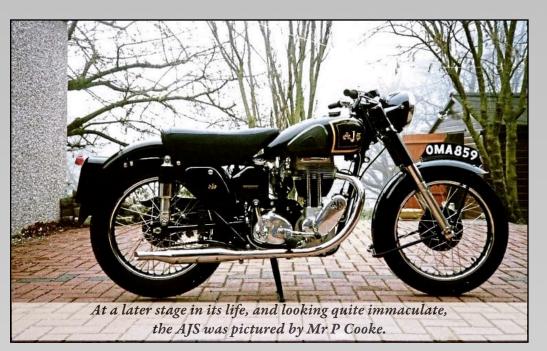
The bike was sold as time and jobs moved on, but having seen the original photographs of OMA 859, I checked the DVLA web site only to find is still listed, but as a 500cc machine, so does anyone know who owns it now?

After parts of this article were first published in Jampot, the AJS & Matchless Owners' Club magazine, we received an email from a kind man in Scotland who'd bought the AJS in the late 1970s as a number of cardboard boxes filled with parts.

When he got the parts home, he realised he had a complete machine apart from an engine, thus explaining how OMA 859, a three-fifty, became a 500cc machine.

As he already had a wrecked 500 AJS 18S engine, his next move was clear – to go ahead and build a beautiful black and gold AJS to add to his AMC family, which comprised two Matchlesses and one AJS.

Twenty years later, the bike was sold on and found a new home, but soon afterwards the new owner also sold the machine and the trail was lost again.

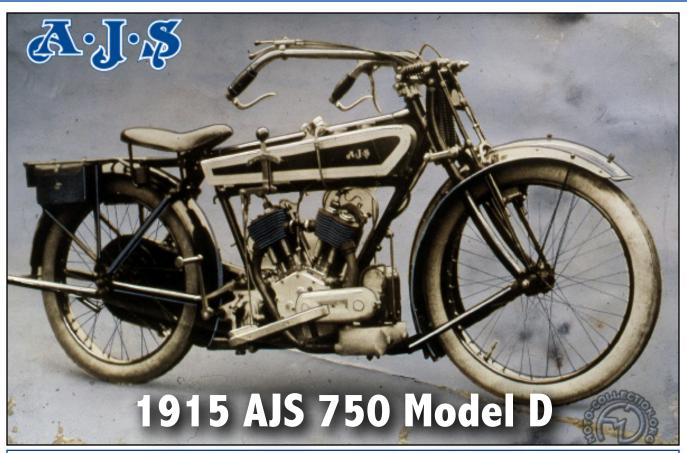


I wonder if any VMN reader knows of the AJS's present whereabouts? I can be contacted on 01621 857130 or at goodingm@waitrose.com



Remember when our bikes were loaded on to the Isle of Man steamers like this (and, to add insult to injury, our petrol tanks were pumped out as well)? OMA 859 is suspended precariously during a trip to Sicily.

Vintage Motorcycle News



File shared by FM Dumas from the archives of Moto-collection.org

First of a long line

In 1911, the Stevens Motor Manufacturing Company, founded at the turn of the century by the four Stevens brothers - who had been supplying V-twin engines to Clyno since 1909 - decided to produce its own bikes under the marque name AJS (for A.]. "Jack" Stevens, the dominant brother). Lightweights came first, followed by the 698cc Model D V-twin, which debuted at the 1912 London Show. It was the start of a long line that culminated in the 1000cc twin of the late 1930s.

Advanced Design

The Model D was a very advanced motorcycle for its day, with primary and final drive by chain and a three-speed gearbox. The first versions had detachable heads, but there were complaints about leaking cylinder joints, so fixed heads were adopted in 1913.

Changed Appearance

In 1915, the displacement was increased to 748cc and the external appearance changed, with the adoption of a vertical frame tube behind the engine and an elegant gas tank enameled silver-gray and black. Detachable cylinder heads reappeared in 1916, but production of these models ended early that same year, as the big AJS was not chosen for the British Army, and the firm had to manufacture munitions. The big-twin did not reappear until the 1919 London Show. However, the British Army did use a number of AJS V-twin power units in its 744cc Clyno machine-gun outfits during WWI. In 1910, Clyno had moved into the former Stevens Screws factory in Wolverhampton, where the father of their engine suppliers had traded as a precision engineer.

SPECIFICATIONS

Engine: 748cc (74x87mm) air-cooled V-twin four-stroke; total-loss lubrication with hand pump Valves: side Fuel System: carburettor Transmission: AJS 3-speed, chain final drive Suspension: Brampton bi-Flex girder forks (front); rigid (rear) Brakes: rim (front); drum (rear) Wheels: 650x65mm clincher (front & rear) Weight: 276 lb

1928 AJS 632CC Four By Alan Cathcart



1928 AJS 632 Four

- Claimed power: 20hp @ 4,500rpm (rear wheel, est.)
- Top speed: 65mph
- Engine: 632cc air-cooled OHV longitudinal inline four, 54mm x 69mm bore and stroke, 6.5:1 compression ratio
- Weight (dry): 385lb (175kg)
- Fuel capacity: 3.9gal (14.7ltr)

By the 1920s, AJS had established a reputation for solid, dependable motorcycles, primarily robust 350cc singles and larger V-twins for pulling sidecars. The idea of AJS building a 4-cylinder seemed unlikely, yet if it hadn't been for the Great Depression, the firm might have done just that.

Unfortunately, the Depression forced AJS into bankruptcy, and to become part of the AMC two-wheeled conglomerate. But before that happened AJS, in an ill-fated attempt to kickstart falling sales, produced at least two 4-cylinder prototypes in the late 1920s, one of which has recently been uncovered and restored by Sammy Miller. It's now on display in his museum alongside the sole surviving 500cc AJS V4 and the title-winning AJS E90 Porcupine.

AJS was born out of the Stevens family's Black Country screw factory at Wednesfield, near Wolverhampton in the British Midlands. The first motorcycle was built in 1897, powered by an American Mitchell engine. Four of the Stevens brothers — Harry, George, Albert John and Joe Junior — started producing their own engines at the turn of the century, selling them to motorcycle manufacturers such as Wolf and Werner under the Stevens name. The AJS marque was founded in 1909 after the brothers began building complete bikes powered by their own engines, so as not to associate them with the Stevens engines sold to rival manufacturers. Since Albert John (known as Jack) was the only one with a middle initial, they named the firm A.J. Stevens & Co. after him, even though all four brothers were equal partners. Source: MotorcycleClassics.com

929 AJS 500cc R10

File shared by FM Dumas from the archives of Moto-collection.org

THE REAL PROPERTY AND INCOME.

Ancestor of the legendary R7

AJS - which took its name from the initials of its founder, Albert John Stevens -began by making engines and progressed to complete bikes in 1909, three years ahead of Sunbeam, the other famous sports make.

First Racing Success

The first racing success for AJS came with a first-place victory in the 1914 Junior TT, the first race in which a checkered flag was used to mark the finish. The only real difference between the TT racers and the production 350 was a supplementary oil reservoir on top of the fuel tank and a supplementary dual-ratio gearbox offering a total of four speeds.

Grand Prix Racers

After WWI, AJS enjoyed remarkable racing success with the ohv 350 "Big Port," which won the Junior TT in 1921 to 1923 and the 1921 Senior, unique in TT history. The first real Grand Prix 350 and 500cc machines from AJS appeared in 1927, with a chain-driven overhead-camshaft. From the Big Port, they took their appearance, the three-speed gearbox, the dry-sump lubrication and the forward-mounted magneto. In 1928, AJS catalogued two overhead-cam models, the 500cc K10 and 350cc K7. The following year, with a saddle tank and Webb girder forks, the designation was changed to R10 and R7. An R7 placed third in the 1927 Junior TT, but victory followed in the Austrian, Belgian, European and Swiss Grand Prix. The 1928 season was less brilliant, but a new fork introduced in 1929 brought the R7 victory in Ulster and Holland, while the R10 set a new world hour record of 108.6 mph in 1930.

SPECIFICATIONS

Engine: 498cc (84x90mm) air-cooled single-cylinder four-stroke Power Rating: 32 hp @ 5800 rpm Valves: chain-driven overhead-camshaft Fuel System: Amal TT twin-float chamber carburettor Transmission: 4-speed foot-shift, chain final drive Suspension: Webb girder forks (front); rigid (rear) Brakes: conical drum (front); drum (rear) Wheels: 3.25x19 inch wire (front & rear) Weight: 317 lb Maximum Speed: 100 mph



File shared by FM Dumas from the archives of Moto-collection.org

Immortal British racer

The legend of the AJS Big Port began with the 1921 Tourist Trophy. The youthful competition manager of AJS, Howard R. Davis, entered the same 350cc power unit (in different cycle parts) for both the Junior and the Senior events, since AJS didn't make a 500. A puncture robbed him of the Junior victory (his teammate Eric Williams won) but Davis was victorious in the Senior, beating the 500 Indians of Dixon and Le Vack.

Enter the Big Port

Success followed instantly. For 1922, the diameter of the big-bore exhaust was further enlarged to 2 inches and when the racer spawned a sports version in 1923, the cumbersomely titled TT B3 OHV was nicknamed "Big Port." The TT designation was retained until 1926, when it was dropped after a disastrous race week for AJS.

Functional Flat-Tanker

In any case, the 1925 and 1926 Ajays weren't real Big Ports. The exhaust diameter was cut to a skimpy 1 7/16 inches, though it returned to its former glory in 1927 and 1928. The Big Port had astounding performance, exceeding 80 mph. It was incredibly light and simple, yet remarkably reliable. Two bolts and a bridge piece retained the cylinder head, which could be dismantled for routine maintenance within five minutes. But this functional flat-tanker was dropped after 1928 in favor of a saddle-tank machine, which weighed 50 lb more. The magic had gone, and in 1931, AJS was taken over by Matchless. The new owners launched a Big Port in 1932, but it failed to fool the faithful.

SPECIFICATIONS

Engine: 349cc (74x81mm) air-cooled single-cylinder four-stroke; constant-loss lubrication Power Rating: 3 1/2 hp Valves: overhead-camshafts Fuel System: Binks racing two-jet carburettor Transmission: 3-speed hand-shift, chain final drive Suspension: AJS Druid-type girder forks (front); rigid (rear) Brakes: drum (front & rear) Wheels: 2.75x21 inch wire (front & rear) Weight: 209 lb Maximum Speed: 80 mph

1931 AJS 500cc S3

File shared by FM Dumas from the archives of Moto-collection.org

The last true AJS

A]S was in bad shape in 1931, when it launched this revolutionary 500, for the company was too highly diversified (automobiles, radio sets, sidecar chassis) and insufficiently financed.

Insufficient Publicity

Solo De

The Stevens brothers staked everything on the launch of a motorcycle that was out of the norm, and the marque lacked the means to promote this model in the manner that it deserved. More than 35 years ahead of the Guzzi V7 (which would eventually popularize this engine configuration), and three years after the disastrous P&M Panthette, AJS chose the transverse V-twin for its compactness, its ideal cooling, its excellent weight distribution and its extremely low center of gravity.

Curious Technical Choices

Even though this configuration was ideally suited to a unit-constructed gearbox and shaft final drive, AJS chose to fit a separate box driven by shaft and with a transfer gear, allowing final drive by an enclosed chain. The included angle between the cylinders was 50 degrees, the cylinder heads were cast from aluminum and the camshafts operating the side-valves were driven by automatically-tensioned chains. More curious still was the location of the clutch on the output shaft of the gearbox and the fitting of the total-loss lubrication system with a return pipe to an under-saddle tank to justify the use of the term "dry-sump lubrication. AJS passed into the ownership of Matchless during 1931, and the firm's new owners, already preoccupied with launching their Silver Arrow twin, discontinued production of the S3, despite its competitive pricing level.

SPECIFICATIONS

Engine: 496cc (65x75mm) air-cooled transversal V-twin four-stroke Valves: side Fuel System: Amal carburettor Transmission: 3-speed, chain final drive Suspension: girder forks (front); rigid (rear) Brakes: drum (front & rear) Wheels: 3.25xl9 inch (front & rear) Weight: 331 lb - Maximum Speed: 65 mph

1933 AJS 1000cc Supercharged V-twin

File shared by FM Dumas from the archives of Moto-collection.org

Frustrated attempt

Inspired by the world records - including a flying kilometer covered at 119 mph - set by a specially-prepared 500 single ridden by Bert Denly at Arpajon in August 1929, AJS decided to attack the absolute motorcycle speed record in 1930. Project leader was Jack Stevens, eldest of the five brothers who had founded the company, with Nigel Spring as team manager and Oliver Baldwin as rider - Bert Denly being judged too small for a 1000cc bike!

Special V-twin

The engine used two cylinders and heads built for the 500cc record-breaker. Each had a chain-driven ohc mounted on a special bottom-end.

Forced Induction

Baldwin reached 132 mph at Arpajon on the naturally-aspirated 1930 version of this bike (70 hp and a compression ratio of 11.5:1), but Joe Wright beat this record on his OEC-JAP with 137 mph. AJS fitted a supercharger, but (since the marque went into liquidation) the project was shelved for over two years, until Matchless bought AJS. By the time the reorganization was complete, Ernst Henne's BMW had raised the record to 152 mph. Even so, AJS signed Wright for a new record attempt on Southport Sands. But the official chronometers of the FIM, which had been sent from Germany, were held up by British Customs and the best time that was achieved was only 135 mph. Then bad weather and a broken valve halted the record session. In late 1933, the AJS made a further attempt at Tat (Hungary), reaching 145 mph, and was then sold at a low cost to Charles Mortimer, father of modem Yamaha rider Chas Mortimer.

SPECIFICATIONS

Engine: 996cc (79x101mm) air-cooled V-twin four-stroke; ML magneto Power Rating: 80 hp @ 6200 rpm Valves: chain-driven overhead-camshaft to each cylinder Fuel System: chain-driven PowerP!us supercharger; carburetor Transmission: Sturmey-Archer 3-speed, chain final drive Suspension: friction-damped girder forks (front); rigid (rear) Brakes: drum (rear) Wheels: 23 inch (front); 20 inch (rear) Weight: 423 lb - Maximum Speed: 145 mph

1938 AJS 350 7R Works Racer

File shared by FM Dumas from the archives of Moto-collection.org

350 7R Works Racer - 1938

Only two of these splendid machines were built, to allow AJS works riders Bob Foster and George Rowley to race in the 350 class while Matchless (both companies were then part of the Associated Motor Cycles group) competed in the 500cc category with its supercharged water-cooled, four-cylinder machines designed to contend with BMW and Gilera.

7R or Not 7R?

Some motorcycle historians contend that the prewar racing AJS 350s should correctly be called "R7" and that only the post-WWII "Boy Racer" is really the 7R. That's just splitting hairs. The few racing AJS 350s sold to private owners from 1931 on were officially catalogued as the Model 7R. The two works bikes built in 1938 were a logical development of these "straight-from-the-crate" chain-driven ohc singles.

Special Suspension

These machines were really very special. They had light-alloy cylinder heads with screwed-in valve seats, aluminum cylinders with iron liners, heavily-ribbed magnesium crankcases and heavily reinforced crankshafts. Their gearboxes were made by Burman to AJS specifications and had magnesium covers. In an attempt to improve roadholding, AJS used - for the first time - a rear suspension with a sturdy triangulated swing arm in combination with plunger dampers fixed to the frame, on similar lines to the 1937 DKW layout. These 7R Works Racers failed to live up to expectations in the Isle of Man but had more success at Brooklands, where speed and good suspension counted for more than roadholding alone.

SPECIFICATIONS

Engine: 348cc (74x81mm) air-cooled single-cylinder four-stroke Power Rating: 28 hp @ 6800 rpm Valves: chain-driven overhead-camshaft Fuel System: Amal racing carburettor Transmission: Burman-AJS 4-speed, chain final drive Suspension: Webb girder forks (front); swing arm with plunger springs (rear) Brakes: drum (front & rear); magnesium front hub Wheels: 3.00x21 inch (front); 3.25x20 inch (rear) Weight: 335 lb Maximum Speed: 106 mph

1939 AJS 500cc Supercharged V4

File shared by FM Dumas from the archives of Moto-collection.org

The era of multicylinders

The Thirties saw the age-old dream of multi-cylinder-engined motorbikes moving within the engineers' grasp. Most makers hurled themselves headlong into building the most complex machines ever seen, and the day of the single-cylinder seemed definitely gone.

Supercharged Version

A]S exhibited a prototype touring bike with an air-cooled V4 power unit at the 1935 London Show, but it was never built in this form, though a racing version appeared in 1936. It was replaced in 1938 by a new supercharged version with the blower mounted at the front of the engine. The bike was extremely fast -but it overheated horribly. AJS designer Matt Wright went back to work and completely revised his project in 1939, redesigning the cycle parts and adopting liquid cooling.

Record Lap-and Retirement

At last the revolutionary double-overhead-cam V4 was competitive-but the march of time prevented it from showing its full potential. The two V4s entered in the Isle of Man Tourist Trophy at the beginning of June finished eleventh and thirteenth after several stops for oil and water. Then the V4 was entered in the Ulster Grand Prix. It was the heaviest bike in the race, but set a staggeringly fast lap record -the first 100mph lap of the Clady circuit-before its front fork broke! The AJS V4 only reappeared a few times in 1946 before it was finally put out to pasture in a museum.

SPECIFICATIONS

Engine: water-cooled 500cc (50x63mm) four-stroke V4 Power output: 55 hp @ 7200 rpm Valves: chain-driven twin overhead camshafts Fuel system: Zoller supercharger Transmission: 4-speed gearbox; chain final drive Suspension: (front) girder fork; (rear) sliding pillar Brakes: (front) drum; (rear) drum Wheels: wire Weight: 405 lb

1952 AJS 500 Spring Twin I Model20

NKA 248

File shared by FM Dumas from the archives of Moto-collection.org

The number-one tourer of the Fifties

Despite the vast financial problems of the immediate postwar period, the British motorcycle industry reacted vigorously by immediately resuming production of high-quality "big bangers." After 1945 the merging of the leading British marques under the M1C (Associated Motorcycles Ltd) banner, which had begun as early as 1937, included AJS, Matchless, Francis-Barnett and even Norton from 1952.

General Motor(cycle)s

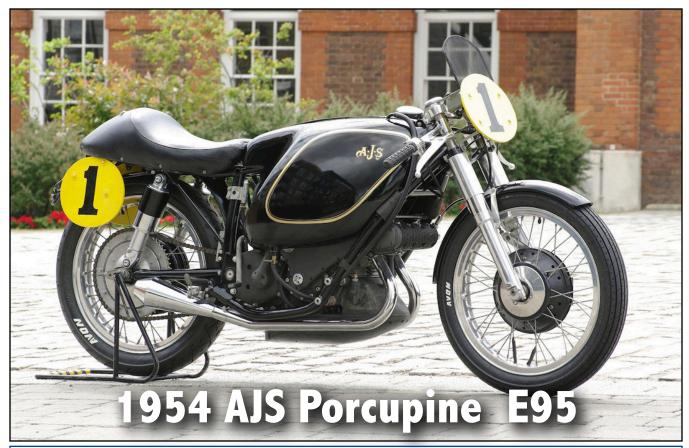
The best features of each member company were available throughout the group, and by drawing on this organ bank, each marque could retain its individuality and produce a distinct range of models. In a smaller way, it was motorcycling's equivalent of the General Motors concept.

Peerless Power Unit

So it was that the AJS Spring Twin, powered by an engine developed by Matchless, made its debut in 1949. Following the lead set by Triumph in 1937, which was to be standard practice right up to the Seventies, the power unit of the "Ajay" was a parallel twin with a 360-degree firing interval, which meant that the pistons rose and fell together, the resulting vibrations generating an inimitable rhythm which gave such engines immense character. The competition-inspired "dustbin fairing" was an essential accessory of the period; it gave excellent protection but was highly susceptible to cross-winds.

SPECIFICATIONS

Engine: Air-cooled 498cc (66x72.8mm) vertical twin Valves: overhead Fuel System: Single Amal carburettor Transmission: 4-speed; chain final drive Suspension: telescopic fork (front); swinging fork (rear) Brakes: drum (front); drum (rear) Wheels: 19in wire



File shared by FM Dumas from the archives of Moto-collection.org

A prickly customer

Five years after the E90 "Porcupine with its horizontal cylinders, A.JS launched the E95 in 1952. This evolutionary model had its cylinders inclined at 45 degrees, permitting a cylinders inclined at 45 degrees, permitting a shorter wheelbase, but it scarcely merited being called "Porcupine" anymore, for instead of the studs on the cylinder head which had inspired the nickname, it had conventional cooling fins.

First Revision

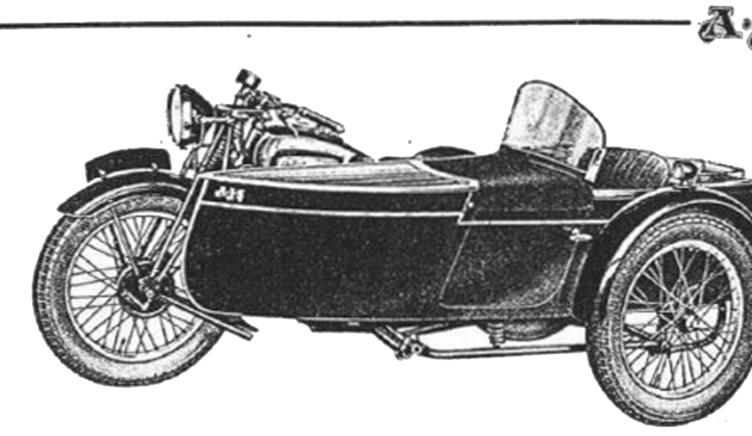
The engine was carried in a double-cradle frame interrupted beneath the engine, and the machine appeared in the Tourist Trophy Races, as did the three-valve single-cylinder 350cc 7R3. The following year, the E95 appeared with two separate cylinder heads instead of one common to both cylinders. The angle of the inlet points was reduced from 43 to 25 degrees to the perpendicular and the frame was also modified, gaining two side cradles supporting the engine.

The End of Works Entries

The final, 1954, Mk 2 version was merely cleaned up aerodynamically, though it was not given a fairing. The front fork and steering head were shortened and the fuel tank was carried down over the flanks of the engine, so that a mechanical gas pump could be fitted, driven from the magneto shaft. As their business worsened, the Associated Motor Cycles group decided that there would be no entries in 1955: it was the end of the road for the E95 and 7R3.

Specifications

Engine: 497cc (68x68.5mm) air-cooled twin-l cylinder four-stroke Power Rating: 54 hp @ 7500 rpm Valves: twin overhead camshafts driven by pinions Fuel System: carburettor Transmission: 4-speecl; dry clutch; chain final drive Suspension: telescopic forks (front); swinging forks with twin damper units (rear) Brakes: drum (front & rear) Wheels: 19 inch Weight: 335 lb



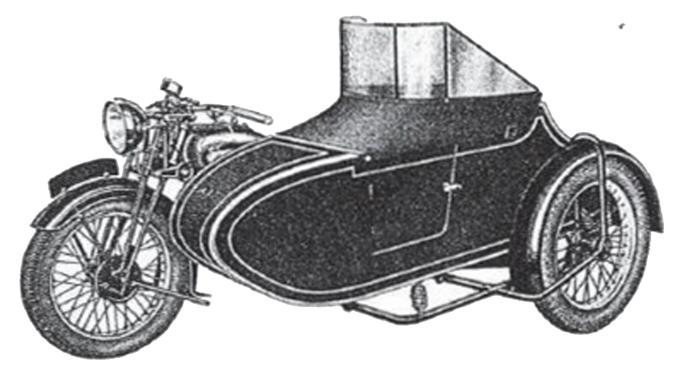
MODEL "B" SIDECAR

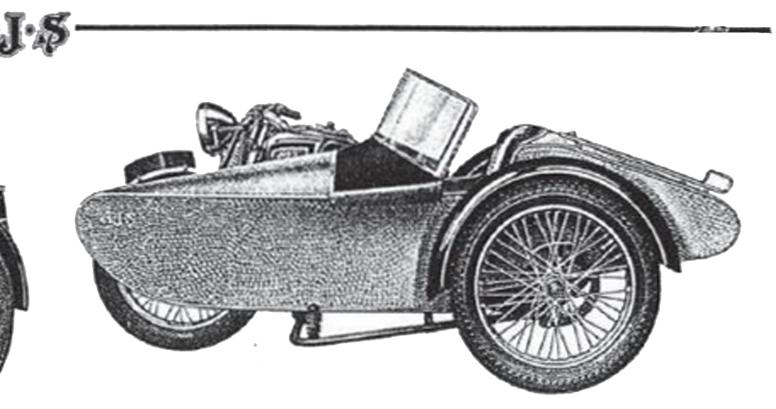
The most attractive sidecar which has ever been produced. Finished in Black and Chromium, with broad Chromium deck strips. There is ample leg room even for the tallest of passengers. Chromium-plated rail fitted to rear deck. Windscreen and Electric Lamp included in specification. Suitable for Models 35/6, 35/18, 35/8, 35/9 and 35/2.

Price-on Stub axle chassis

£17 - 15 - 0

Price—on Special chassis with quick detachable $\pounds 19 - 5 - 0$ wheel interchangeable with wheels of 35/2





MODEL "D" SIDECAR

This sidecar presents an entirely new design in Sports-Tourist Models. It is finished in Mottled Aluminium and all fittings are heavily Chromiumplated. Note the sloping tail to which is fitted a large luggage grid. Suitable for use with Models 35/6, 35/18, 35/8, 35/9 and 35/2.

Price—on Stub axle chassis $\pounds 23 - 0 - 0$ Price—on Special chassis with quick detachable wheel interchangeable with wheels of 35/2. $\pounds 25 - 0 - 0$

MODEL "C" SIDECAR

Although this is generally termed an "Occasional Two-Seater" there is sufficient room in the seats to accommodate two adults in comfort. When only one passenger is carried the back can be closed, which gives the impression that the body is of the luxurious single-seater type. Extremely well sprung and upholstered. Windscreen and electric lamp included. This sidecar is only suitable for Model 35/2 and is supplied with special wheel frame chassis, the wheel of which is interchangeable with those on the motorcycle.

£25 - 5 - 0 (935 AJS advertising





A Dotted history of the AIS & Matchless Owners Club Ltd

A letter written by John Trant was published in the Motor Cycling magazine dated January 17th 1952. In this letter John asked if there was a Club for owners of AMC machines in the London area? He suggested that if there was not such a Club, then one should be started and interested AMC owners were asked to contact him at his home address.

From the replies he received a small group of enthusiasts met at the Ace Café on the North Circular Road, North London in late January 1952. An ad hoc committee was formed to get things running and within a short space of time a new meeting place had to be found since the numbers of enthusiasts turning up were too many for the space available at The Ace. The new venue was a pub in Greenford, but increasing numbers meant another change to a pub in Putney, South London.

Things moved quickly and during 1953/4 Club sections existed in Essex, West Hertfordshire, Kent, North London, Bristol and East Surrey with the Headquarters Branch being based in South East London.

In the early days of the Club, rallies were an important part of the events calendar. These were often two-day events with a fun and games gymkhana being the central theme. The first such rally was held in 1954 at a field owned by Raymond Way adjacent his house in Berkhampstead in Hertfordshire. Between 40 and 50 AMC motorcycles took part in the road run on that first rally, with members coming from many parts of the country. One couple, Mr and Mrs Alexander drove some 500 miles from Aberdeen in Scotland. They stopped overnight in Nottingham and after the rally they continued on down to the south coast of England to complete their holiday. It is not certain whether the journey was undertaken by motorcycle or car, but which ever form of transport they used it would have been quite a journey some 48 years ago.

The 1955 rally was held in the same venue with the 1956 rally moving to Tring in Hertfordshire. The modern rally was first run at Newlands Corner near Guildford, then Windsor and progressively expanded into the major events that we now know.

Today we have our beautifully presented Jampot magazine. In 1954 the first Club Journal was a loose leaf Newsheet. By 1955 this had become some 14 pages of hand written and Roneo'd copy (remember those machines?) known as AMC Owners Club News.

A member in 1955 paid a joining fee of 7s 6d (37.5p), plus between 2s 6p (12.5p) and 7s 6p (37.5p) for membership, depending on the time of the year that membership was taken out.

Up until around 1963 the Club was called the AMC Owners Club. Following the AMC Group takeover of Norton, followed by the James and Francis Barnett two-stroke marques, there was a desire on the part of the membership to be seen as separate. With no disrespect intended, the Club was re-named and became the AJS & Matchless Owners Club.

Many of the early members are still active and have an interest in the Club today and their knowledge and enthusiasm for all things AJS & Matchless has not reduced with the years. If we can get them to expand on these short words through the medium of The Jampot, we can all share in their experiences.

From those early days our Club has carried on expanding and now has some 4,200 plus members on a worldwide basis. The Club has its own Administration and Stores building with one of the best One-Make Owners Club spares scheme – AMOC Parts & Services and dedicated members who will come forward to run and manage the Club into the future.

More info on the club

The Club was founded in 1952 to cater for enthusiasts of the marque, and grew until in the late 50's it was large enough to rival all other one-make clubs. With the decline of motorcycling generally in the mid-sixties, the Club suffered as did manufacturers and other clubs alike, until the final blow came with the closure of the factory. No new machines or spares would be made and the future of the Club looked far from rosy. For a time enthusiasm for the marques was kept alive by only headquarters branch.

The '70s saw the formation of the new Club Sections and the re-birth of old ones bringing in a new lease of life for the Club. More and more machines are now being restored and are in regular use. In our estimation some 2,500 machines are owned by members of the Club. This is not a sum total as you as a new member may be bringing in a machine which is new to the Club. There are also many veteran, vintage and pre-war machines of the marques also in existence.

At present the Club consists of 36 UK based sections and 23 international sections with over 4,200 members, who live in Canada, Australia, New Zealand, U.S.A., Denmark, France, Norway and Sweden, to name only a few. We are therefore, a truly International Club.

What the club has to offer

The running of the Club is invested in a Management Executive, which is elected at the AGM. The Executive carries out policy decided at the AGM, but what the Club offers is a result of what we our members contribute.

MEMBERSHIP BENEFITS

Contact with fellow classic motorcycle enthusiasts through one of the largest one-make Clubs, with family participation actively encouraged. Ownership of a machine of he marque is NOT a pre-requisite to membership - just interest and enthuisiasm.

MONTHLY JOURNAL The Jampot, which is widely considered to be the most professional magazines of its kind. It contains news, letters, technical and historic articles and both private and trade advertisements.

ROAD RUNS & trials, camping weekends, & fun days at a racing circuit and many other social events on a local and national basis. The club's premier annual Jampot Rally is held in the UK during an August weekend, the Alternative Rally which follows a back-to-basics style of camping weekend and international rallies in Europe and beyond are all organised by club members.

SPARES SCHEME, offering a comprehensive range of new and second-hand spare parts, authentic transfers, manuals and regalia via mail order/telephone/fax or personally from the Club's own retail outlet in Northamptonshire. Credit cards welcomed.

MACHINE DATING SERVICE, accurate post war machine dating via original factory dispatch records and documents. Assistance with obtaining age related numbers and reclaiming original Registration numbers.

INSURANCE SCHEME, offering competitive rates with a first class service.

NATIONAL AND INTERNATIONAL, with 34 UK based, 8 overseas and 19 overseas contacts. Also affiliated to the Federation of British Historic Motor Vehicle Clubs (FBHVC).

TECHNICAL ADVICE available from local sections and the Club's technical helpline.

ANNUAL RAFFLE for a machine of the marque.

PRE-WAR MODELS the club is currently preparing a Pre-War register and aims to better cater for these models.

As a member of the AJS & Matchless Owners Club, you join with over 4,000 other enthusiasts world-wide who have an interest in motorcycling, both classic and modern. The club's ever developing services and activities are expressly geared to the promotion, preservation, riding and enjoyment of all classic machines, but especially bikes of these marques. Whether you're an old stalwart classic restorer, a born again biker or a complete newcomer to the classic bike movement, the club has a friendly welcome with an enviable reputation for providing the fullest range of services and a calendar of runs, trials and social events which spans the entire year.

For more information contact:

AJS & Matchless Owners Club Unit 3, Robinson Way Telford Industrial Estate Northants NN16 8PU UK



VAT No	VAT No. 380 1297 60								
Ow Affiliated	.S. & Match / ners Club to the Federation of British Historic SEAS APPLICATION FO	Lim Vehicle Ch	ited						
I wish to become a member of the AJS & Matchless Own Block Capitals Please.									
urname Forenames									
Address									
Email	Date of Birth								
How did you hear about the club? Vintage Motorcycle News - Winter 2021									
PLEASE NOTE: Club membership automatically gives you access to the Spares Scheme.									
DATA PROTECTION ACT IF YOU DO NOT WISH YOUR DETAILS TO BE CIRCULATED <u>WITHIN</u> THE CLUB (i.e. TO LOCAL SECTIONS etc), PLEASE TICK THIS BOX									
PAYMENT: Please debit my Visa/Delta/Mastercard/Maestro/Switch/Amex number									
///	/ Exp	iry date	/						
Security No. (CVV) Issue No (Switch	h cards) Start Date (Ma	estro cards)/						
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For Club Use Number									
Actioned									



Our next three Special Editions are about Douglas, Indian and Matchless Motorbikes

It is still time to send your stories, articles, anecdotes or photos at

vmn.editor@rogers.com



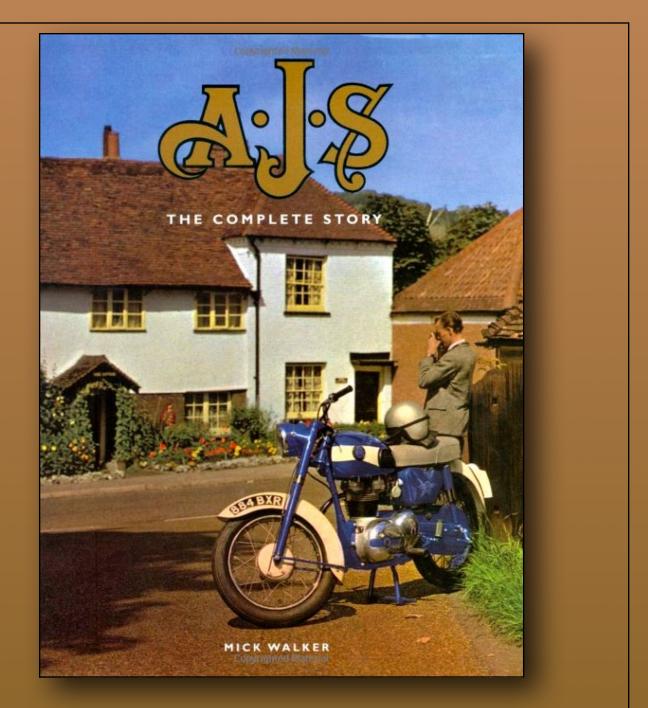
Volume 38

July/August 2019

Issue 4



AJS/MATCHLESS W owners club north america											
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AJS, MATCHLESS & NORTON HYBRID MOTORCYCLES OWNED (optional) The club is maintaining a compilation of AMC manufactured motorcycles in North America. To help us, we would be grateful if you would consider completing the table below with a list of machines currently owned by you along with relevant information.											
 <i>Key to provide data for the help 1, 2, 3 column in the table:</i> 1. I am willing to help members with technical advice on this model. 2. I have some spares that I would be willing to sell for this model. 3. I can furnish photographs or literature for this model. 											
Make	Year	Model	Engine#	Frame	e# Tran	is# Tra	ins Type	Original	Y/N He	elp 1, 2, or 3	
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AJS: The Complete Story (Motoclassics) by Mike Walker Hard cover: \$70.00 Available from Amazon.ca

AJS is one of the best-known names in British motorcycle history. Founded in 1910 by the Stevens brothers, in Wolverhampton, the company produced well-built touring and sporting machines for the next twenty years. In 1931 the financial problems that had dogged the company came to a head and AJS was wound up. Its savior was Matchless, who moved production to Plumstead, London, but retained the AJS name as an important part of the scene. Over the years the AJS and Matchless ranges had more and more in common, and by the post-war period the bikes were virtually identical, but the AJS name graced some of the best-loved bikes including the stunning 7R racer. The complete story of the AJS and its motorcycles is told here from the early days in the Midlands to the end, as part of the AMC combine.

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MOTORCYCLE CLASSICS PREWAR PERFECTION..... .\$9.99



Take a trip down memory lane with the Motorcycle Classics Prewar Perfection special issue! Packed with stories about all different kinds of bikes (from a 1936 Harley-Davidson EL and 1941 BMW R75 to a 1927 Cleveland 4-45 and a 1933 KTT Velocette), this collection features something new and interesting on every page.

Read about the enduring legacy of the inventor of Carmex lip balm (his grandson rides and fixes up motorcycles), travel to Berlin to discover the roots of the 1939 BMW R51, and learn how the 1930 Henderson KJ Streamline was used as a police transportation vehicle. This is the perfect read for the history lover and motorcycle collector!

Other articles include:

Refined Pioneer: 1921 Reading Standard – Some antique motorcycles are time travelers. They do much better in current conditions than they did when they were built. One of these is the

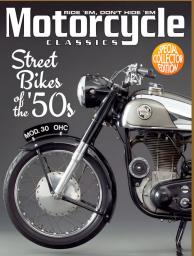
Reading Standard.

• Diamond in the Rough: 1931 AJS S8 Deluxe – Restorer John Whitby was flipping through ads for cars when a motorcycle in the background of a photo caught his eye.

 A Little Fun on the Side: 1941 BMW R75 – Owner Mark Dunn urges us to retain our historical memory while keeping it light at the same time with a military sidecar BMW.

And more!

MOTORCYCLE CLASSICS STREET BIKES OF THE '50S.....



.....\$9.99 Motorcycle Classics dedicates this Special Collector Edition to the remarkable street bikes of the 1950s. Numerous classic motorcycles were designed and built in the '50s, and Motorcycle Classics has put together a 96-page special edition featuring articles that explore the decade and what it brought to the motorcycle world. The Harley-Davidson KHK, Honda JC58 Benly, Devil Lusso Extra, and many others are all covered in this glossy-page, full-color guide. Whether you're just discovering these bikes or have been riding them since they first came on the market, you're sure to enjoy this special edition.

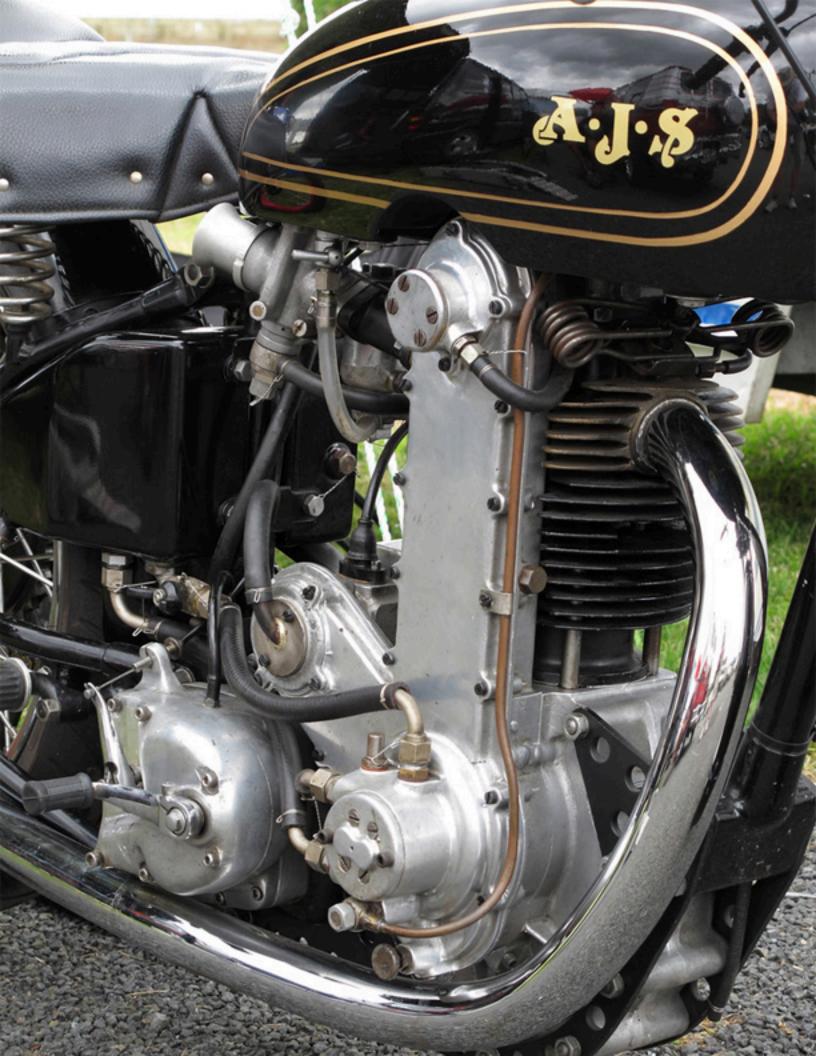
Articles in this guide include:

• Unapproachable: 1957 Norton Model 30 - Joe Block's rare 1957 Model 30 is one of just 70 built that year, but that doesn't stop him from riding it.

 Big Sid's 1950 Series B Vincent Meteor – A towering man, Sidney Biberman left a monumental legacy as a Vincent aficionado, tuner, and lover of speed.

• Dad's 1958 BMW R50 - Shortly after the death of Richard Costello, his son Bill found a note attached to his father's R50 in the garage. Since then, Bill has devotedly restored his dad's BMW.

• Speed Twin: Ed Turner's Triumphant Twin – Emulated by everyone, Triumph sold a parallel twin first.







It looks like an AJS

but is it one?

Whilst searching the Internet, I discovered this old photo of an AJS equipped with a diesel engine. Can you help me identify this motorcycle?

Send any information related to this motorbike to:

VMN.Editor@rogers.com

Here is what we know

This bike was last seen about 20 years ago in the U.K. It was owned and probably built by Mr. Ernest (Ernie) Dorset. It is equipped with a diesel engine.

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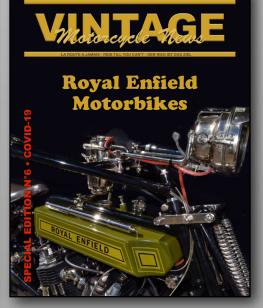








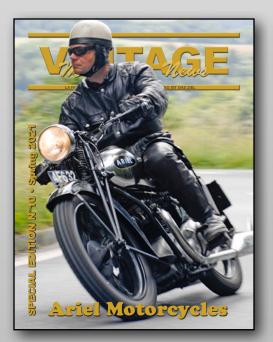






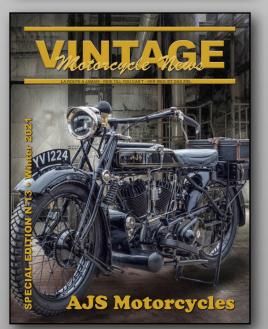
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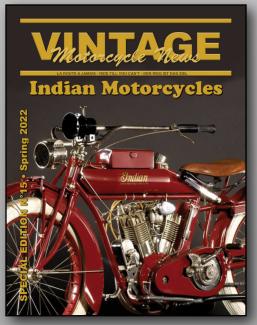
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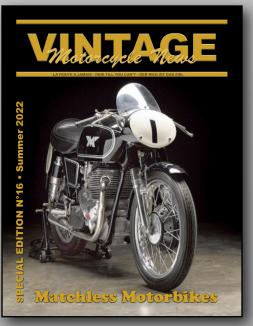


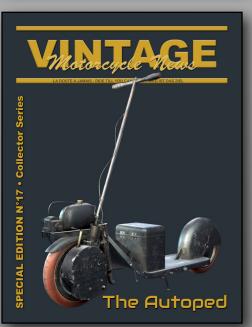












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