Fully Grown Lightweight

Dubbed by writers of the past a 'heavy lightweight,' the AMC G2/Model 14 series earned a doubtful status in some quarters. Yet ***Richard Rosenthal*** *finds the reality far removed from reputation.*

'Give a dog a bad name' – an oft quoted saying of my elders when, as a child, I committed the usual all too frequent misdemeanours. And it was thanks to frequent teenage misdemeanours with spanners and inappropriate lubrication that AMC Lightweight singles gained a dodgy, or should that be doggy? reputation. But before dispelling any myths, let's first look at the concept.

By 1958 AJS and Matchless offered an impressive, 17 model apiece, line-up. Both 350 and 500cc singles were catalogued in a variety of roadster and competition guises. The ohv 592cc G11 parallel twin had grown to 646cc and became the G12, while a sporting version coded the G12CSR was listed too. On the racing front, the Matchless G45 'over the counter' ohv parallel twin cylinder racer, based on the machine Derek Farrant took to victory in the 1952 Senior Manx GP, was replaced by the ohc single cylinder G50. In effect, it was a stretched AJS 7R which was still in production – surely a logical step.

Although AMC owned lightweight manufacturers James and Francis-Barnett, who were, in 1958, supplying a range of up to 250cc road and competition two-strokes, headquarters saw an opening for an ohv four-stroke 250 single – their first since WWII. It was a decision probably prompted by rumours of an impending 250cc solo learner limit.

Unfortunately for the British factories, the lightweight two-wheeler market had become more and more complicated during the Fifties. Mopeds, headed by the German NSU Quickly, had taken over from autocycles, cyclemotors and ultra-lightweight motorcycles. Many youngsters fancied the style, and clean lines of scooters, no oil oozing engines to dirty jackets and 'drainpipes.' Here in Britain, though not on the Continent, the under 250cc 'learner' motorcycle was soon destined to become a stop gap for many between either car or larger motorcycle. Only a small minority of qualified riders chose a 250cc model, a decision sometimes dictated by size of pocket. As a result, sales of sophisticated quarter litre motorcycles could only be modest.

The competition was stiff, but a market existed and AMC went for it, as did rival makers. BSA totally redesigned the pre-unit BSA C12 to give the C15, veteran designer Val Page came up with the Ariel Leader, Norton gave us their spanking new Jubilee and the AMC design team led by Philip Walker produced the Matchless G2 and AJS Model

14. The indications were, that British factories were at long last taking the quarter litre class seriously

Before then, BSA had continued with their C series 250s and launched the 123cc Bantam in March 1948, Triumph returned to the under 250cc class with the 149cc Terrier and then the 199cc Cub and Ariel had their Colt. Royal Enfield, of course, never dropped lightweights, expanding their post-WWI range from the Flying Flea to include the Ensign, Prince, Model S and Crusader. And Villiers of Wolverhampton supplied engines galore to lightweight makers. Yet for more than a decade after WWII, it seemed that AJS, Matchless and Norton simply didn't want to know about quarter litre motorcycles, despite that class's popularity on the Continent.

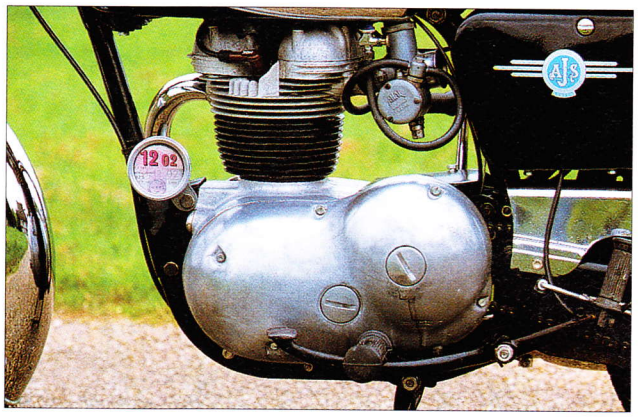
But in 1958, as AMC launched the Matchless G2/AJS Model 14, aimed at the potentially lucrative lightweight market and the first time buyers who were soon to be limited to 250cc until their L plates were torn up. Although, along with its bored and stroked, 348cc brother, the G5/Model 8, it has since been dubbed the AMC 'lightweight' single, at 330lb it is anything but light. Yet, viewed in hindsight, it was a viceless learner motorcycle and an ideal choice for the qualified owner who didn't want a larger motorcycle.

Casually glance at the 250cc AMC and it appears to be of unit construction like many of its rivals, but this is an illusion. A steel pressing above the separate cylindrical gearbox hides two fastening straps and a drawbolt adjuster which tensions the primary drive. A good idea or simply too complicated? Both.

AMC lightweight primary chains can be adjusted to perfection, yet with the steel pressing in place the machine looked clean and tidy. There is no need for thrashing, worn out primary chains grinding the primary covers, alternators and sundry other parts to paste as happened on rival unit models with their fixed centres of the crankshaft and gearbox sprockets. Machined arcs in the rear of the crankcase enable rotation of the gearbox using the drawbolt once the retaining straps are slackened. Easy? Well, fairly. Yet many AMC lightweight owners still couldn't be bothered.

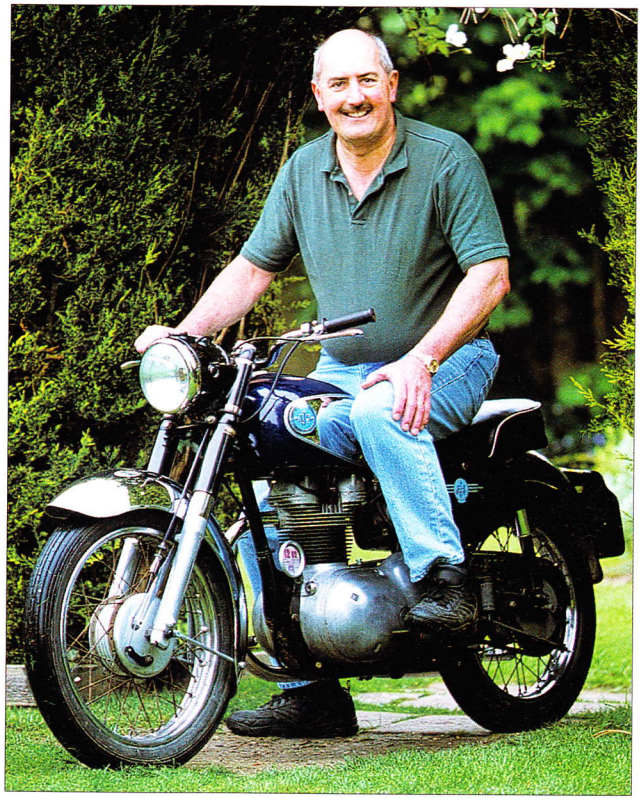
While delving into the transmission's entrails, it's worth having a second look at the gearbox. The clutch supporting mainshaft is set high and eccentrically to the circular gearbox shell, facilitating primary drive chain adjustment. For adequate lubrication a full three pints of oil is recommended. Skimp on that advice and the cluster and bearings are at risk. Unfortunately filling an AMC lightweight gearbox was a slow job, which encroached on valuable teenage drinking time. Youthful owners often omitted a pint or two of oil in favour of fluid of a different kind in the pub! Gearboxes screamed in protest.

Departing from AMC's proven long stroke, slow revving design, with bags of torque at virtually countable revs, Mr Walker came up with an over square motor with its cylinder barrel axis mildly offset from the crankshaft to lessen piston slap. Like other short stroke engines the unit thrived on revs but protested when slogged. It required a riding style foreign



It looks like a unit construction mill – but it isn't.

AMC's Teledraulic forks were common across the range.

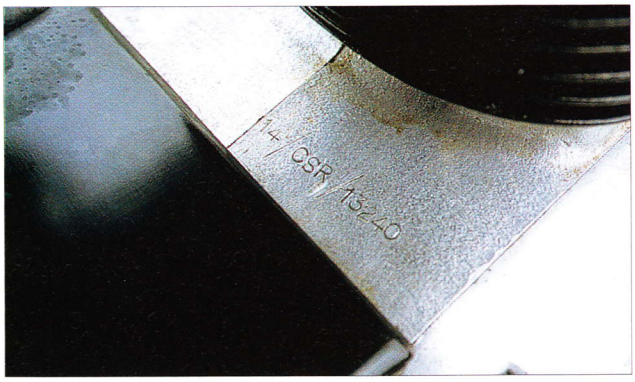


Keith Saunders is more than happy with his versatile 250cc single.

Owner Keith Saunders pays no heed to the poor reputation of Ajay lightweight singles and thoroughly enjoys his 250.

to the long stroke man, which caused an adverse comment or two in the period press. Little did they know that high revving Honda twins were being loaded onto UK bound boats as they penned their letters of protests. And the AMC lightweight offered the chance to revise riding styles before throwing a leg over a new generation of motorcycles.

While I like the AMC lightweight engine for its clean lines and willing performance, another oiling thought mists my mind. A mere 2½ pints of the stuff lurks in a crankcase mounted oil tank with a long filler accessed by a chrome cap mounted in front of the cylinder barrel in the left hand crankcase. Pleasingly no external oil pipes clutter the engine and the AMC plunger pump works well. But such a small volume of lubricant is worked hard and regular checks and changes are a good idea. Again, teenagers didn't always bother!

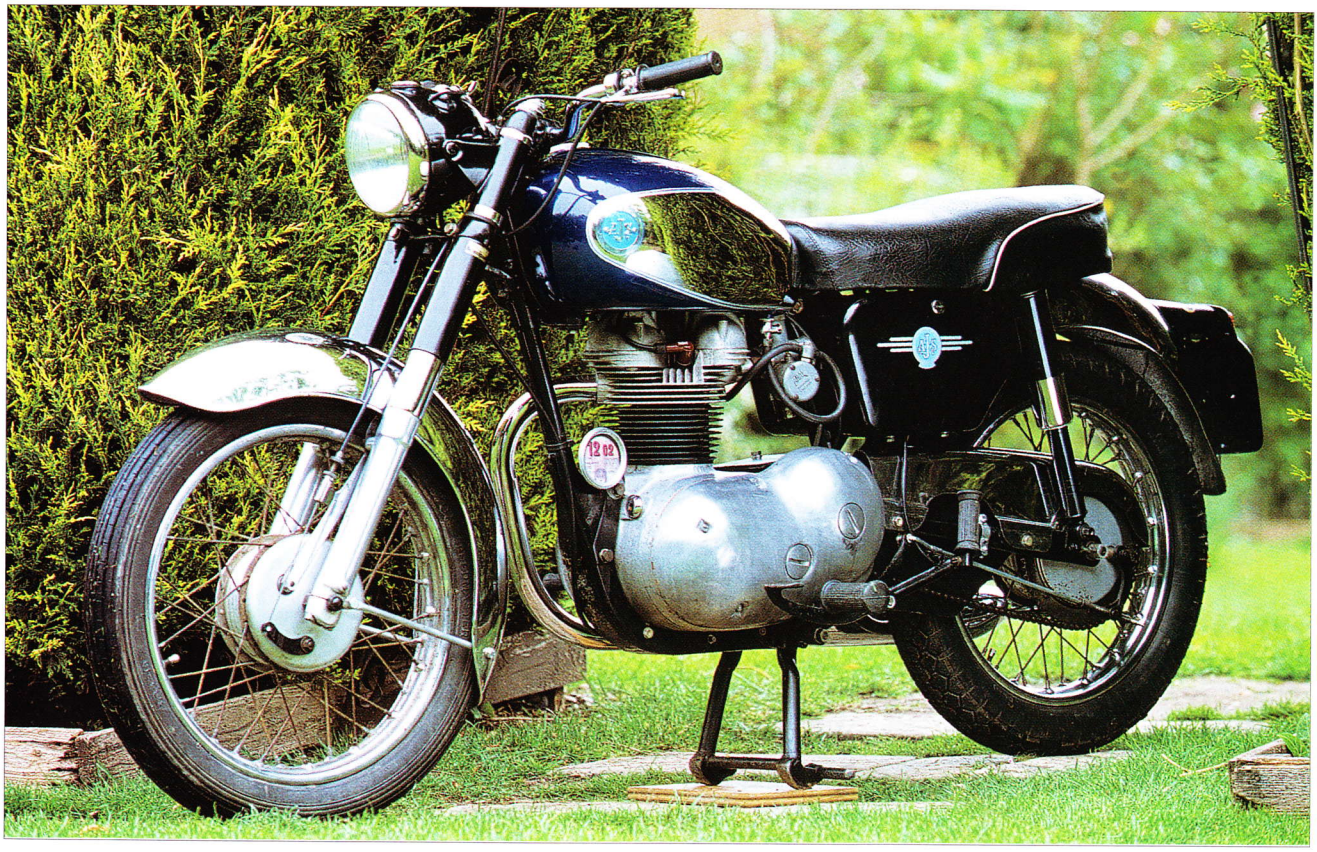


CSR prefix on engine number reveals Keith's machine to be one of the later examples.

Engine construction erred mildly towards performance, with hairpin valve springs, double-row roller big end, and main bearings comprising two ball races on the drive side and a single phosphor bronze bush on the timing side. Wipac wizardry is hidden safely in the primary drive chaincase, while the ignition points are sited behind a neat plate on the right side of the alloy engine cover. At its launch, AMC ambitiously claimed 18hp at 7200rpm from their new baby, thanks to a 7.8:1 compression ratio and a downdraught, 1 1/16in Amal Monobloc carburettor.

Needing more power in an attempt to stay with the imported opposition, in 1962 AMC gave their 250 an 8:1 compression ratio, 1⅛ in Amal carburettor, stiffer valve springs, duplex primary chain and beefed up 350cc clutch. By the end of production, the compression ratio was 9.5:1 and Plumstead were claiming 22.5hp at 7600rpm. Completing the package, AMC fitted chrome mudguards, tank and chain guard, naming the model the G2/Model 14 CSR.

For me lightweight CSRs have always seemed neat, pretty motorcycles which sounded well and were never last in the pack, even in the company of bigger-engined machines. On paper, I have never seen any reason why they deserved the reputation dished out by a vocal minority. Had I not squandered money and shed space on a Deek and an NSU Max, an AMC lightweight CSR had been a consideration. But I had never ridden one until I met Len



It's no lightweight in reality, but the Model 14 CSR offers middleweight comfort and performance at modest cost.

Saunders at a recent VMCC club night.

"You ought to have a try on Keith's 250cc Ajay Richard, you'll like it," asserted Len. "I rode it on last weekend's charity run and had a brilliant day." With this recommendation I lost no time in arranging a *Classic MotorCycle* visit to Brenda and Keith Saunders' pub-The Plough, Shepreth, nr Cambridge, 01763 260523 and the chance to dispel or confirm the myths surrounding this heavy lightweight.

Last time I visited Keith, the AJS Model 14CSR was sitting on his motorcycle bench in the workshop awaiting the finishing touches before returning to the road. The Ajay is an odd man out in Keith's collection, a representative collection of the motorcycles he once owned or has never parted with, together with his current modern machines. A James Comet rubs shoulders with a 500cc Triumph Daytona, Suzuki GT750 Kettle, BSA Bantam, A7, Bultaco Sherpa and a near new Suzuki 1200 Bandit.

Spotted in a local paper small ad, the incomplete CSR had undergone much engine work and the price was right. Back home Keith and dad Len, both time served motor mechanics, surveyed the kit in the warm, well-equipped workshop. Although many parts were missing, what Keith bought was sound and as described by the vendor. Only the electrical work, tank repairs, paintwork and chrome plating were farmed out.

Specialist AMC dealer Richard Gaunt (01283 740085) supplied a second tatty and very incomplete machine which yielded tinware and a dented but salvageable fuel tank –

Fact File

1963 AJS Model 14CSR

Engine type	ohv single cylinder four-stroke
Capacity	248cc
Bore x stroke	69.8mm x 64.8mm
Compression ratio	8:1 (final model 9.5:1)
Ignition	coil ignition (uprated to 12V from 6V on test machine)
Electrics	6V Wipac (uprated to 12V on test machine)
Transmission	Chain primary drive, four-speed gearbox, chain final drive
Frame	tubular cradle
Suspension	front: AMC Teledraulic front forks rear: swinging arm with twin shock absorbers
Tyres	front 3.25 x 18in (test machine) rear 3.50 x 17in
Brakes	both 6in sls drum, both wheels
Weight	330lb (150kg)
Seat height	30in (762mm)
Fuel capacity	3gal (13.5l)
Top speed	85mph (MCM January 1966)
Fuel consumption	80mpg average (MCM January 1966)

Club Contact:
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