

**ROAD  
TESTS OF  
NEW MODELS**

# 248 cc AJS SAPPHIRE NINETY

LAST SUMMER saw this sports model really hit the limelight with a clear-cut class win in the Thruxton 500-Mile Race. Its success, which remained a talking point long after the meeting, was a reminder that the quarter-litre market is not the exclusive preserve of non-British manufacturers. Following this, in the autumn when the AJS 1965 range was announced, there was news of modifications to give more go to the Sapphire Ninety, as this 248 cc model is now named.

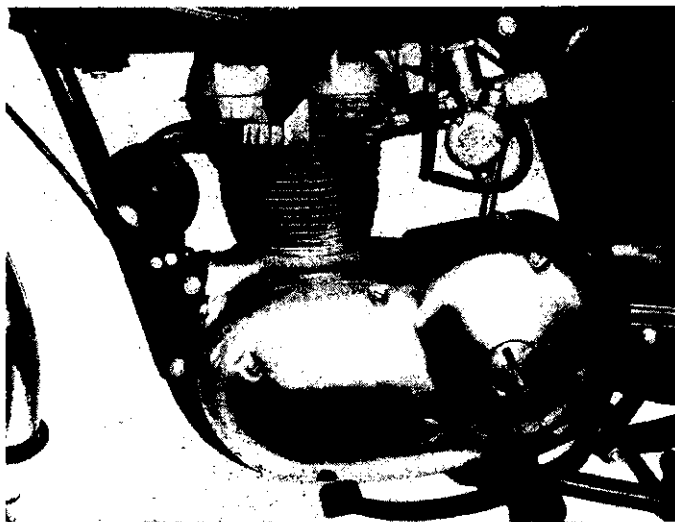
Coil valve springs replace the hairpin variety. Compression ratio is stepped up from 8 to 1 to 9.5 to 1 and gear ratios are closer than before. A larger-capacity silencer is fitted. It is tucked in and raised slightly to keep it out of the way when cornering.

First impressions mean a lot. When you straddle the Sapphire Ninety you are assured that AJS don't regard riders of two-fifties as necessarily on the small side.

Dimensions of the handlebar-seat-footrest set-up are such that whether your pals call you Lofty or Titch you should feel at home.

The handlebar is almost flat with slightly downswept grips and induces a forward lean rather than a crick-in-the-neck crouch. The riding position allows you to tuck in and adopt a relaxed, comfortable stance when hustling.

A criticism of the Matchless equivalent model tested in 1962 was that, on full lock,



Smooth contours give the power unit an attractive appearance and make cleaning easy

## Specification and Performance Data

**ENGINE:** AMC 248 cc (70×65mm) overhead-valve single-cylinder. Double-row roller big-end bearing; crankshaft supported in a ball and a roller bearing on the drive side and a plain bearing on the timing side. Light-alloy cylinder head, cast-iron cylinder barrel. Compression ratio 9.5 to 1. Dry-sump lubrication; oil capacity, 2½ pints.

**CARBURETTOR:** Amal Monobloc, 1½in choke; air slide operated by handlebar lever.

**ELECTRICAL EQUIPMENT:** Coil ignition. Wipac 54-watt, alternating-current generator mounted on drive-side crankshaft charging Exide 11-amp-hour battery through rectifier. Wipac 6in-diameter headlamp with pre-focus light unit and 30/24-watt main bulb.

**TRANSMISSION:** AMC four-speed gear box clamped to rear of engine. Gear ratios: bottom, 17.97; second, 11.68; third, 8.05; top, 6.51 to 1. Multi-plate clutch with bonded friction facings. Primary chain ½in duplex in cast-aluminium case. Rear chain 1/2 × 0.305in

with metal guide over top run. Engine rpm at 30 mph in top gear, 2,800.

**FUEL CAPACITY:** 3½ gallons.

**TYRES:** Dunlop: front 3.25×17in ribbed; rear, 3.25×17in studded.

**BRAKES:** 6in-diameter, front and rear; finger adjusters.

**SUSPENSION:** AMC telescopic front fork with hydraulic damping. Pivoted rear fork controlled by Girling three-position, spring-and-hydraulic units.

**DIMENSIONS:** Wheelbase, 53in. Ground clearance, 5½in. Seat height, 30in. All unladen.

**WEIGHT:** 330 lb, fully equipped, including approximately one gallon of fuel.

**PRICE:** £224 18s 5d, including British purchase tax.

**ROAD TAX:** £2 5s a year.

**MAKERS:** Matchless Motor Cycles, Ltd, Plumstead Road, London, SE18.

**DESCRIPTION:** "Motor Cycle," 22 October 1964.

**MEAN MAXIMUM SPEEDS:** Bottom\*, 31 mph; second\*, 48 mph; third\*, 70 mph; top, 82 mph. \*Valve float occurring.

**HIGHEST ONE-WAY SPEED:** 83 mph (conditions: still air, rider wearing two-piece suit).

**MEAN ACCELERATION:**

	10-30mph	20-40 mph	30-50 mph
Bottom	3.8 sec	—	—
Second	4.6 sec	4.8 sec	—
Third	—	7.8 sec	6.8 sec
Top	—	11.2 sec	9.8 sec

Mean speed at end of quarter-mile from rest: 70 mph.  
Mean time to cover standing quarter-mile: 19.4 sec.

**PETROL CONSUMPTION:** At 30 mph, 112 mpg; at 40 mph, 84 mpg; at 50 mph, 66 mpg; at 60 mph, 58 mpg.

**BRAKING:** From 30 mph to rest, 30ft (surface, dry tarmac).

**TURNING CIRCLE:** 14ft.

**MINIMUM NON-SNATCH SPEED:** 19 mph in top gear.

**WEIGHT PER CC:** 1.32 lb.



In any case, one soon became accustomed to the heaviness and then it passed unnoticed.

Suspension at both ends was firm and well damped and contributed to predictable handling when flicking the machine quickly through a right-left-right series of bends.

Rippled surfaces on metalled roads or pot holes on unmade tracks failed to catch the suspension off guard.

The power bonus makes itself felt in the middle and upper part of the range. There is an overall impression of increased liveliness, and the unit is remarkably free from vibration.

**Bull point** is that the added power has not been obtained at the expense of tractability.

The Sapphire would woofle along at 30 mph in top gear on a trace of throttle and without any fuss. At this pace in built-up areas there was just a subdued burble from the exhaust.

Mechanical noise was at a commendably low level, but the exhaust note became obtrusive at wide throttle openings.

The Smiths speedometer is easily read and was no more than 2 mph optimistic throughout the range. There is no trip mileage recorder, but the total mileage is shown to the nearest tenth.

For high-speed, open-road cruising, suitable gear-change speeds were 28, 40 and 60

one's thumbs could be trapped against the petrol tank. This does not occur on the Sapphire Ninety.

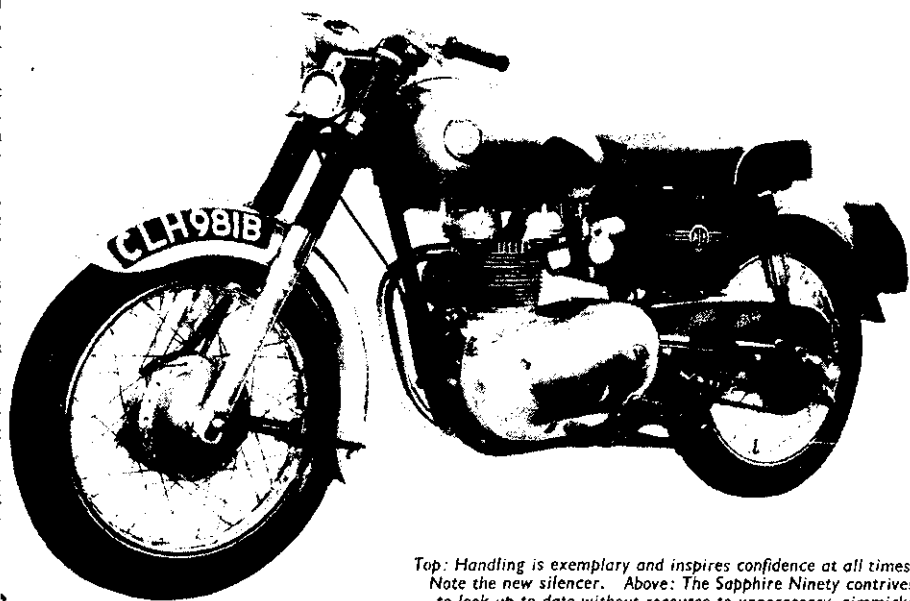
Almost smooth, plastic handlebar grips are fitted. They do not provide enough friction, especially when they are wet.

Control layout is good. Levers and pedals are correctly positioned for easy use.

During the test the AJS was ridden in a variety of weather conditions and over a variety of surfaces, some of them exceedingly slippery.

**No praise is too high for the handling; the rider felt confident of staying in control at all times.**

A trace of heaviness could be detected in the steering when traffic threading at walking pace, but this was more than offset by rock-steady adhesion to line at the other end of the scale.



Top: Handling is exemplary and inspires confidence at all times. Note the new silencer. Above: The Sapphire Ninety contrives to look up-to-date without recourse to unnecessary gimmicks.

mph. The 1965, closer spacing of the ratios enhances the appeal of the machine. Happy cruising speed was 60 to 65 mph.

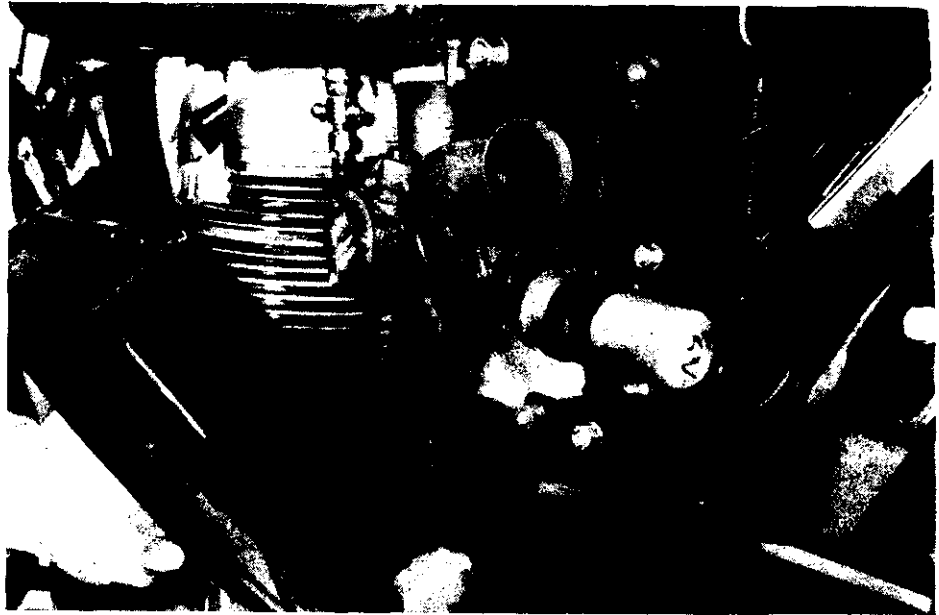
Restarting from a standstill on a 1 in 6 hill was accomplished without difficulty. The clutch could be fully engaged after covering the first yard or so.

Using third gear, main-road gradients were dismissed with nonchalance. This ratio (8.05 to 1) provided brisk acceleration for overtaking whether solo or two-up.

### ZIPPY

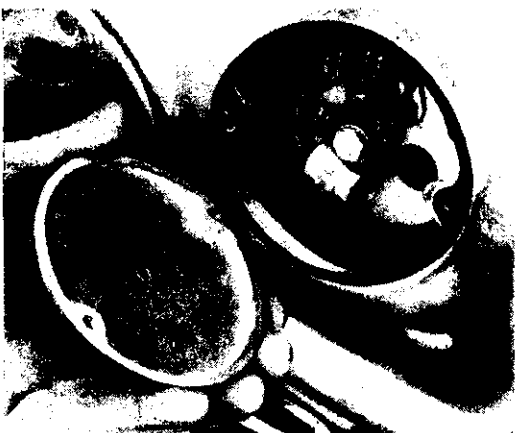
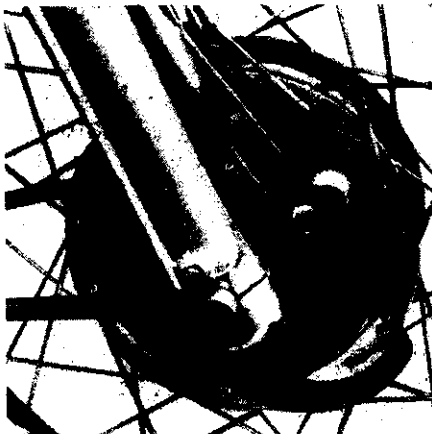
In fact, acceleration in general, producing as it does a standing-start quarter-mile in under 20 seconds, is decidedly brisk and is more than adequate to hoist the model into the zippy class.

Gear selection is so smooth and easy that it immediately calls to mind the knife-through-butter cliché, although



Removal of the left side cover gives access to the ignition coil and rectifier. The battery is located under the seat

Excellent controllable braking is provided by the British Hub front brake. It maintained its performance during heavy rain



Two screws secure the contact breaker cover on the right of the power unit. Points adjustment is easy

a shade less pedal travel would be preferred.

Ratios should be swapped as fast as the pedal could be operated.

The clutch engaged smoothly in normal usage, but full-power take offs when the standing-start quarter-mile figure was being obtained produced some snatching. There were never any signs of clutch drag. No adjustment was required throughout the period of the test.

Starting proved simple. It was advisable to leave the carburettor tickler alone and use the handlebar-mounted air-slide lever. The engine was sensitive to the air setting until the proper operating temperature had been reached.

### NO PINKING

Fuel consumption was light, especially in view of the performance available. The engine performed quite happily on premium-grade petrol and showed no tendency to pink under heavy load.

Oil is contained in a separate sump on the right of the crankcase. Consumption was negligible even during sustained hard riding. Oil tightness was marred by a slight weep from the gear-box end cover.

Performance and handling can be exploited to the full only if matched by the brak-

ing. In this respect the AJS earned full marks. Both brakes were light in operation and efficient at all speeds.

Ventilation scoops are provided on the front brake but, on the test model, the slots had not been properly cleared of metal. However, no fading was experienced.

Lighting was adequate for 60-mph cruising after dark. The dipswitch has a wipe action; this is excellent as it ensures that there is no possibility of lag during the change from main to dipped beam or vice-versa.

Action of the lighting and ignition switches was spongy. A firm action with a positive click when the movement is complete would be more acceptable.

Accessibility for routine maintenance of rocker settings, contact-breaker, battery and other items is good. The tool kit supplied with the machine is adequate.

Thanks to the smooth contours of the power unit and liberal use of chromium-plating cleaning is a straightforward task.

The Sapphire's attractive finish is given the final touch by its blue and chrome and gold-lined petrol tank. Here is a bike which is easy on the eye: easy on the pocket for tax, insurance and fuel; and with its peppy performance, easy to have fun on.