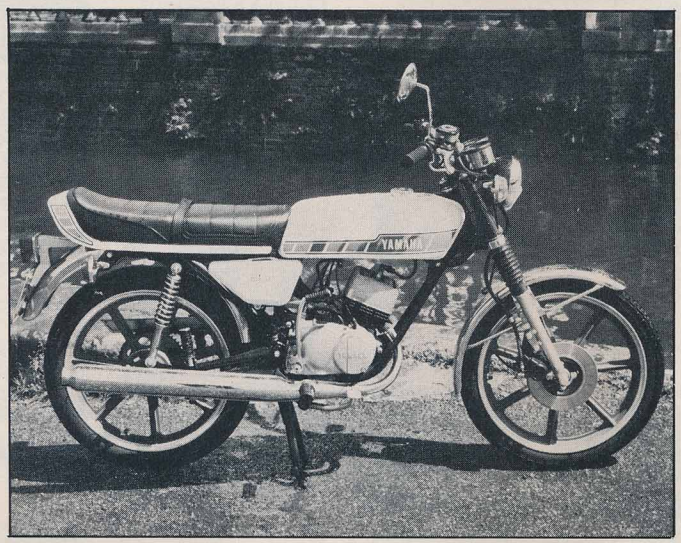
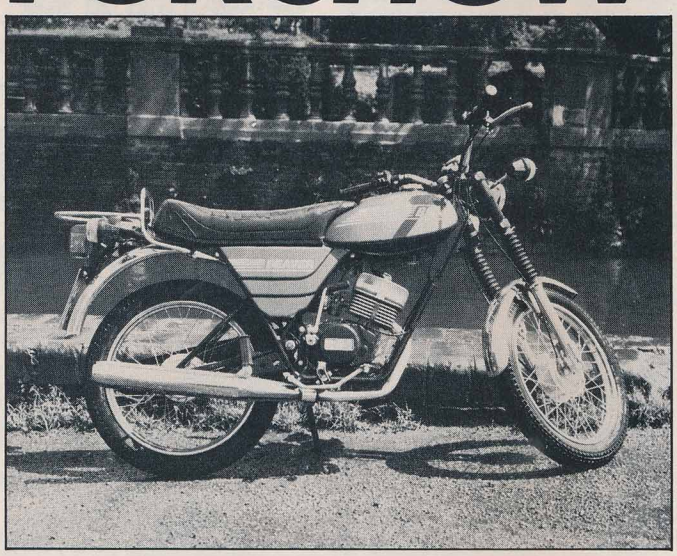
BSA BEAVER | YAMAHA RD50

Britain is fighting back in the sixteener race with the BSA Beaver. How does it compare with Yamaha's RD50? Words by *Rick Kemp*. Photography by *Jerry Young*.

FIFTIES FOR SHOW AND GO





Like it or not we're stuck with the current sixteener regulations. Though experience shows that putting novice motorcyclists on machines with very poor performance potential can be dangerous, the simple logic of limiting the under-seventeens to top speeds of 30mph appeals to the bureacratic mind and is unlikely to be repealed in the near future.

With that in mind, the fledgling BSA company have been wise to make the most of the regulations with their new 50cc Beaver. By making it very light, and offering it with the bare minimum of gearbox ratios, they aimed to provide the Beaver with better than the normally poor acceleration usually found with underpowered sixteeners.

So we decided to put the Beaver's bite against the hottest property in the sixteener class, Yamaha's RD50.

The fact that the reappearance of the BSA name is accompanied by a 50cc motorcycle might be a disappointment to some, but it's a start. Using the same formula as the NVT Rambler, the Beaver is assembled by BSA with predominantly Italian parts including the engine. The seat, tank and side panels are the same as the Rambler and the cantilever rear suspension is similar, but the monoshock unit has adjustable preload for the spring.

Yamaha have gone all out with the cosmetics on the RD50. Red alloy wheels match the red and white paint job and most people who saw the two bikes together agreed that the Yam looked prettier while the BSA had a chunky, functional appearance.

The RD50 also has a more comprehensive specification including tachometer, front disc brake, oil injection and a far superior tool kit. The engines differ in their method of lubrication, the Beaver has to have oil pre-mixed in the tank at a 20 to 1 ratio while the Yam has a separate oil tank and a throttle-controlled pump feeding the engine through the inlet manifold. The Yamaha is obviously more convenient. The Yamaha's conventional engine is slightly oversquare with a bore and stroke of 40x39.7mm while the Franco Morini unit (nothing to do with V-twins) in the Beaver measures 39x41.8mm.

Power output figures are not available for either bike but the Beaver has a wider spread allowing the use of four gears as against the Yam's five.

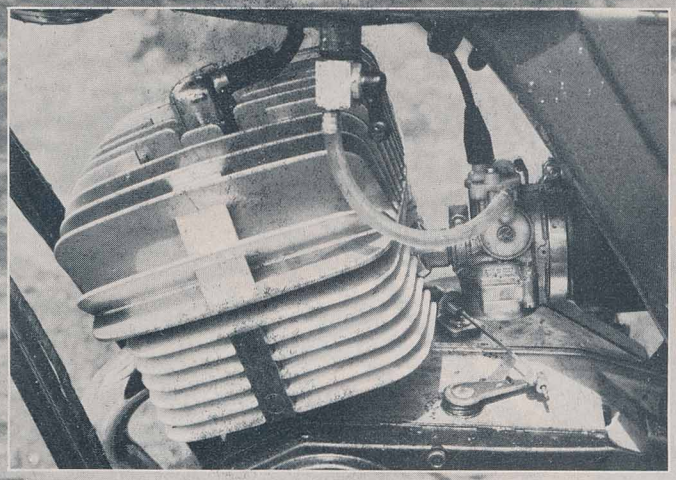
Gearboxes get well used on sixteeners and the RD, in particular, with its narrow power band needed lots of stirring. In fact the only way to get rapid forward progress was to keep the engine in-between 6,000 to 6,500rpm and just keep flicking your left foot up and down on the gearchange. After reaching top gear (fifth) and should you have occasion to throttle off, such as to avoid being sucked into the slipstream of a passing milk float, you find that two or perhaps three down changes are necessary to find that power band again. It's the hamster/treadmill syndrome – getting nowhere fast.

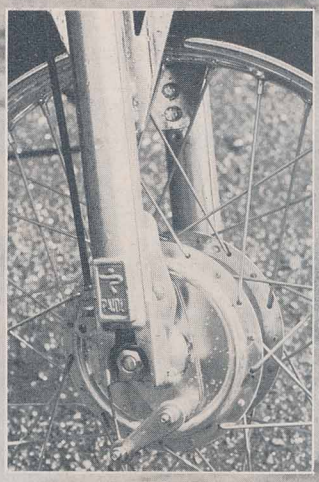
The Beaver with its wider power band and one cog less, is much more relaxing to ride. Third gear will cover 20-30 mph and top will produce a true maximum of 36mph, identical to the RD. The Beaver is quicker 0-30mph by almost half a second which isn't much, but any advantage to be had in this department is worthwhile.


BEAVER


YAMAHA


RIO RATA
Restaurant
RESTAURANT
AOH 173T
YAMAHA
HGN 17T





The Beaver's little Honda engine runs on 20 to 1 petrol mixture and has four speeds. Front fork and brake look spindly but are effective.

Being restricted-speed machines neither bike is in any danger of being limited by frame design. The Beaver has a duplex cradle with heavy gusseting around the steering head. The Yamaha's twin front down tubes meet a single rising tube at the rear. Both have full seat loops. The three-way adjustable mono-shock on the Beaver seems capable of taking a heavier rider than the Yam's conventional dampers, which tended to bottom if any rough treatment was handed out.

Stopping on both bikes proved no problem, a safety aspect of lightweight machines that no-one can argue about. A smart 7.9inch disc, hydraulically-operated on a bike weighing 173lbs is what Yamaha have come up with. The Beaver relies on drums front and back but does have a 40lb weight advantage. It also has better tyres with a larger contact area, 3.25x17 Michelins at both ends. The Yam is shod with Yokohama rubber, 2.50x18 front and 2.75x18 rear. This should give the Beaver the edge in the wet but we didn't have the opportunity to assess this.

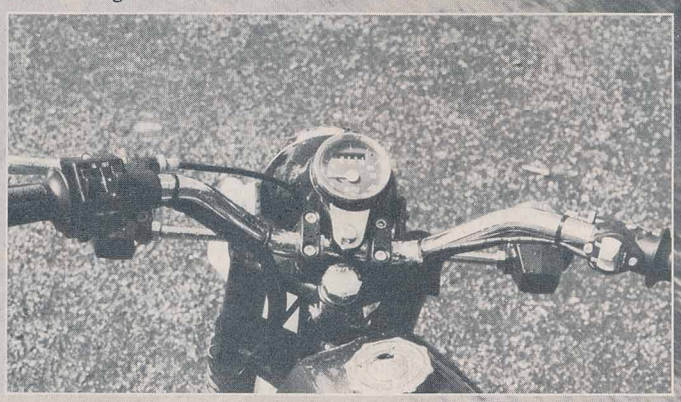
Starting is with a kick lever in both cases and both have carburettor mounted chokes. The Yam's choke is progressive while the Beaver's is full on until the throttle slide flicks it off at about three-quarters open and both proved to be reliable.

Fuel consumption was odd. The Yam was the more frugal at 72mpg while the Beaver could only manage 66mpg. Both have 16mm choke carbs, Dellorto for the BSA and Minkuni for the Yam. But while these may seem to offer the performance restrictions it is in fact the exhaust pipe length that limits the top end of each engine. It's no secret at the BSA works that the way to restore the Beaver's bite is to shorten the pipe.

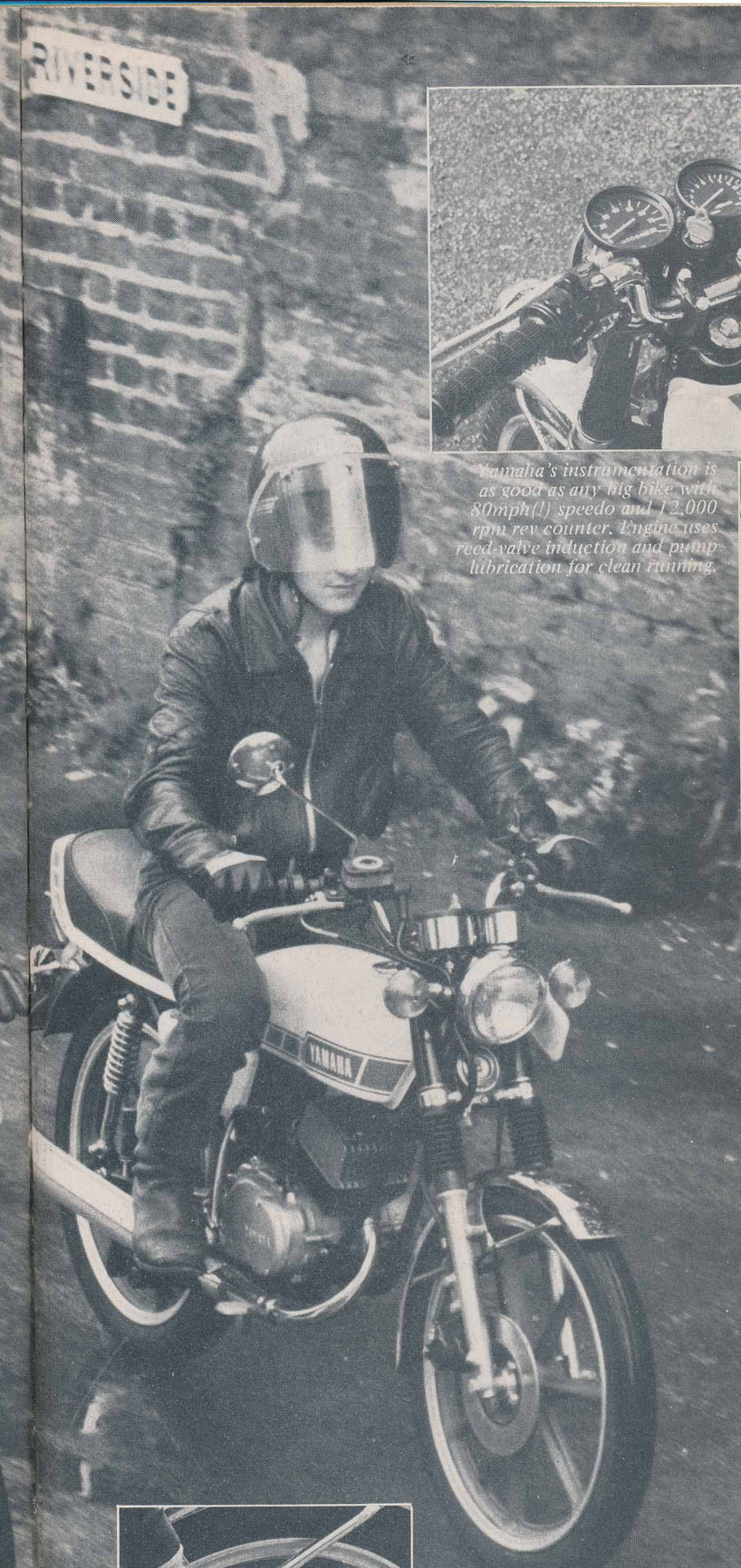
The handlebar layouts indicate the difference in specification between the two bikes. The Yam is equipped with two dials, a centrally mounted ignition switch and hydraulic brake master cylinder, the Beaver just a speedo. Both have lighting switches on the left and engine kill button on the right and the Beaver uses direct lighting. Both have adequate lighting for their performance, the Beaver a 20watt headlight and the Yam an 18watt unit. The Beaver's battery is worth a mention. American made, it's a rechargeable dry battery and consists of three Ni-Cad 2½ah cells connected in series and needs no maintenance.

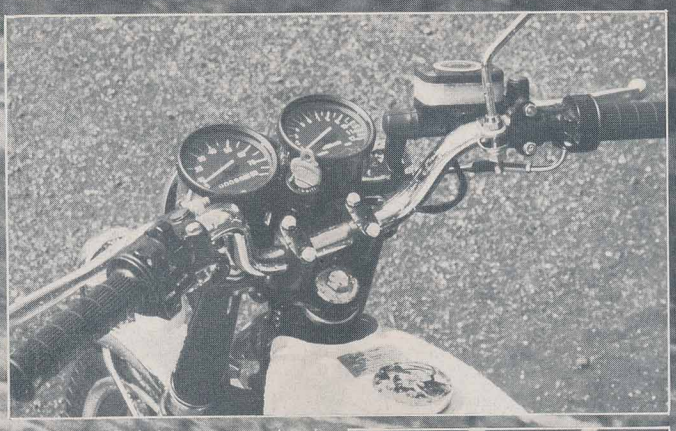
As us jaded hacks are all the wrong side of thirty we recruited two sample 'sixteeners'. Sean and Pat who rode the bikes and gave us the younger view-point. After the initial scramble to ride the RD "cos it looks good", they were pleasantly surprised by the Beaver and said it felt quicker.

The Beaver's front brake took sometime to recover after being left in the over-

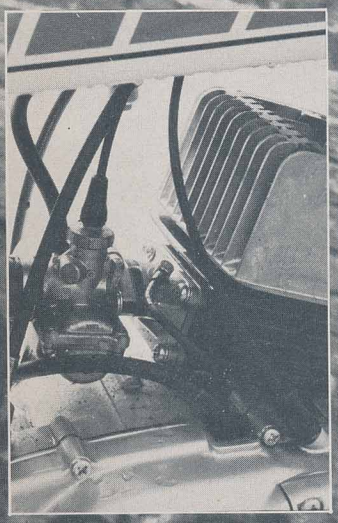


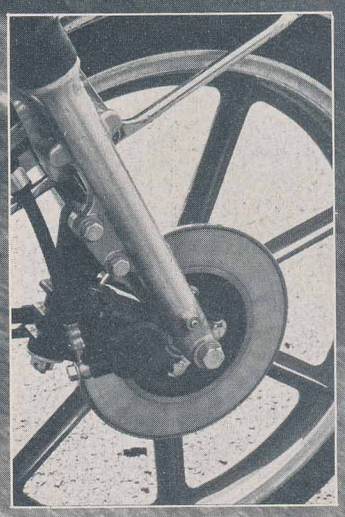
Sparce instrumentation on the Beaver is just a 45mph speedo.





Yamaha's instrumentation is as good as any big bike with 80mph(!) speedo and 12,000 rpm rev counter. Engine uses reed-valve induction and pump lubrication for clean running.





Yamaha's wheels are cast alloy finished in red. Disc brake is for looks.

night rain but grabbed well enough after it had dried out. And both were concerned at the lack of ignition lock on the Beaver. "Things get nicked don't they".

The Yam's hinged, locking seat was much preferred to the Beaver's which is kept in place by a large plastic headed screw. When the Beaver's tool kit was revealed they fell about laughing – it consists of a plug spanner, an allen key and a 'C' spanner for suspension adjustment all in a plastic cubby bolted under the seat. The Yam has a nine-piece set.

Our sixteeners concluded that the Beaver was nicer to ride but the RD50 would make a bigger splash outside the disco. We can't argue with that.

The better equipped Yamaha comes expensive at £442 to the Beaver's £389 The Brigand, a trail styled BSA stablemate at £14 more could turn out to be the best seller. But what BSA have is a functionally fine but cosmetically poor alternative to the Japanese teeny-wheelers.

	YAMAHA RD50	BSA BEAVER
Price:	£442 inc VAT	£389 inc VAT
Warranty:	6 months/10,000 miles parts and labour	6 months/4,000 miles parts and labour
Engine:	Two-stroke single	Two-stroke single
Capacity:	49cc (40x39.7mm)	49cc (39x41.8mm)
Lubrication:	Autolube	Petroil, 20 to 1
Comp Ratio:	5.9 to 1 (corrected)	9 to 1
Ignition:	Flywheel magneto	Flywheel magneto
Carburetion:	16 mm Mikuni	16 mm Mikuni
Max Power:	n/a	n/a
Primary Drive:	Gear	Gear
Clutch:	Wet multiplate	Wet multiplate
Gearbox:	Five-speed	Four-speed
Final Drive:	Roller chain	Roller chain
Electrics:	6v 4ah battery, flywheel generator, 18/18w headlight.	Nickel-Cadmium 2½ah battery, 20/20w headlight
Fuel Capacity:	1.75 galls	1.2 galls
Frame:	Duplex cradle	Duplex cradle
Suspension:	Damped telescopic fork (f) Damped swing arm (r)	Damped telescopic fork (f) Damped swing arm (r)
Brakes:	7.9inches disc (f) 4.3inches drum (r)	5 inch drum (f) 5 inch drum (r)
Tyres:	Yokohama 2.50x18 (f) 2.75x18 (r)	Michelin 3.25x17 (f and r)
DIMENSIONS		
Wheelbase:	47.2inches	45½inches
Seat Height:	29.9inches	30inches
Grnd Clrnce:	7inches	9inches
Handlebar Width:	27.3inches	28½inches
Dry Weight:	173.8lbs	134lbs
EQUIPMENT	Rev counter, trafficators, mirrors, steering lock, seat lock	Trafficators, steering lock,
PERFORMANCE		
Top Speed:	36mph	36mph
0-30mph time:	14.3secs	14.0secs
Actual speed at indi. 30mph:	28.9mph	31.5mph
Av. Fuel Consumption:	72mpg	66mpg
Tank Range:	126 miles	79 miles
Importer/ Manufactuer:	Mitsui Machinery Sales (UK) Ltd, Oakcroft Rd, Chessington, Surrey	BSA Co Ltd, Benneley Rd, Garretts Green, Birmingham