

1 History

Yamaha's history goes back almost a hundred years, to the time when Torakusu Yamaha founded a company to make organs and then, at the turn of the century, pianos as well. That branch of the company is now the largest maker of both instruments in the world.

Seeking to expand, Yamaha set up a separate motor-cycle division in July 1955. The first machine was a simple, single-cylinder, 125cc two-stroke – virtually a straight copy of the German DKW design which the British BSA company had also copied in the immediate post-war era and manufactured as the Bantam.

The first Yamaha, the YAI, known to Japanese enthusiasts as Akatombo, the 'Red Dragonfly', quickly established a reputation as a well-built, reliable machine. Its popularity was boosted by racing successes and a second machine, the 175cc YCI, was soon added to the range.

The first Yamaha-designed machine was the twin-cylinder YDI produced in 1957. A racing version, producing 20bhp (far less than European 250cc racing engines of the era), won the important Mount Asama race that year, but total production was still modest – just 15,811 machines, far less than Honda and Suzuki.

The next three years saw rapid growth and the appearance of the first true sports model to be

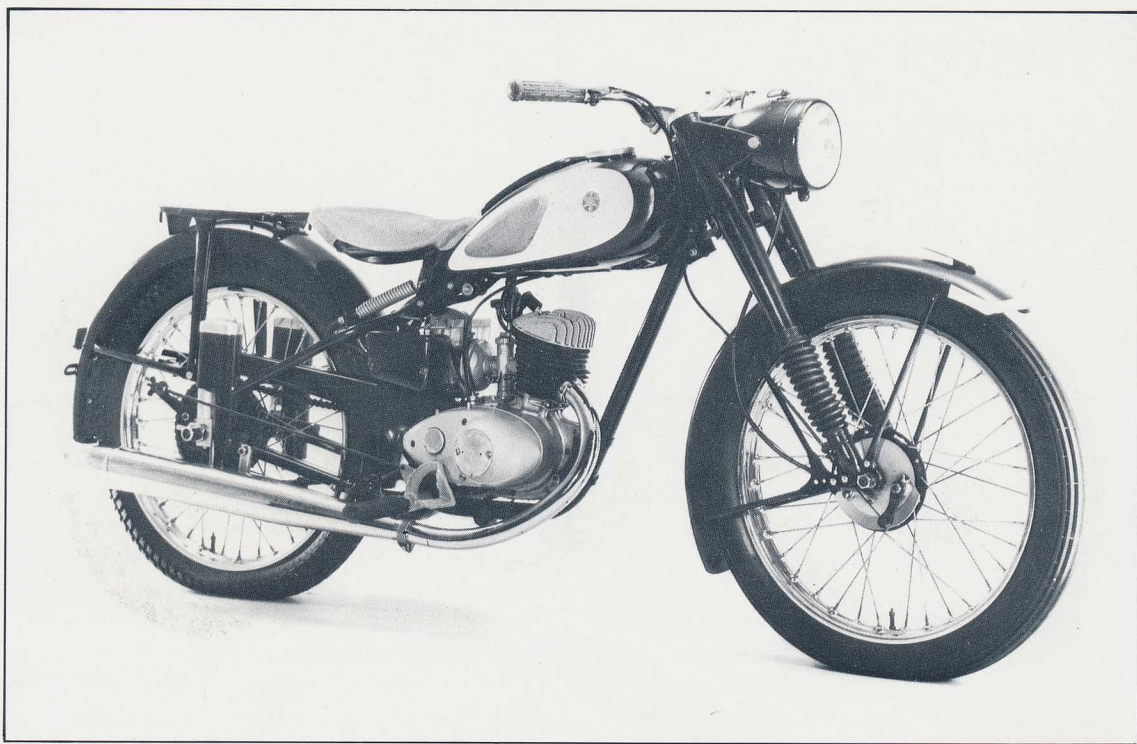
offered by a Japanese factory – the twin-cylinder YDS1 with five-speed gearbox. This went on sale in 1959 and, to assist owners who wanted to compete in sports events, kits to convert the machine for both road racing and moto cross were offered for sale.

By 1960 production had rocketed to 138,000 machines – a 600 per cent increase in just three years. Then came a period of recession in Japan during which Yamaha, in common with the other major Japanese manufacturers, strove to increase their exports so that they would not be so dependent on the home market.

To assist the export drive, Yamaha sent a team to the European Grands Prix in 1961, but it was not until the 1963 season that worthwhile results were achieved, full details of which are given in chapter 2.

With the Korean war over and with the American market booming, exports rose rapidly. In 1962 Yamaha had exported only 12,000 machines. This figured trebled to 36,000 the next year, then leapt to 87,000 in 1964.

The previous year Yamaha had taken a step that endeared them to sporting riders around the world. They had produced for sale a small batch of 250cc road-racing machines – the air-cooled, twin-cylinder TD1. Every year since then the



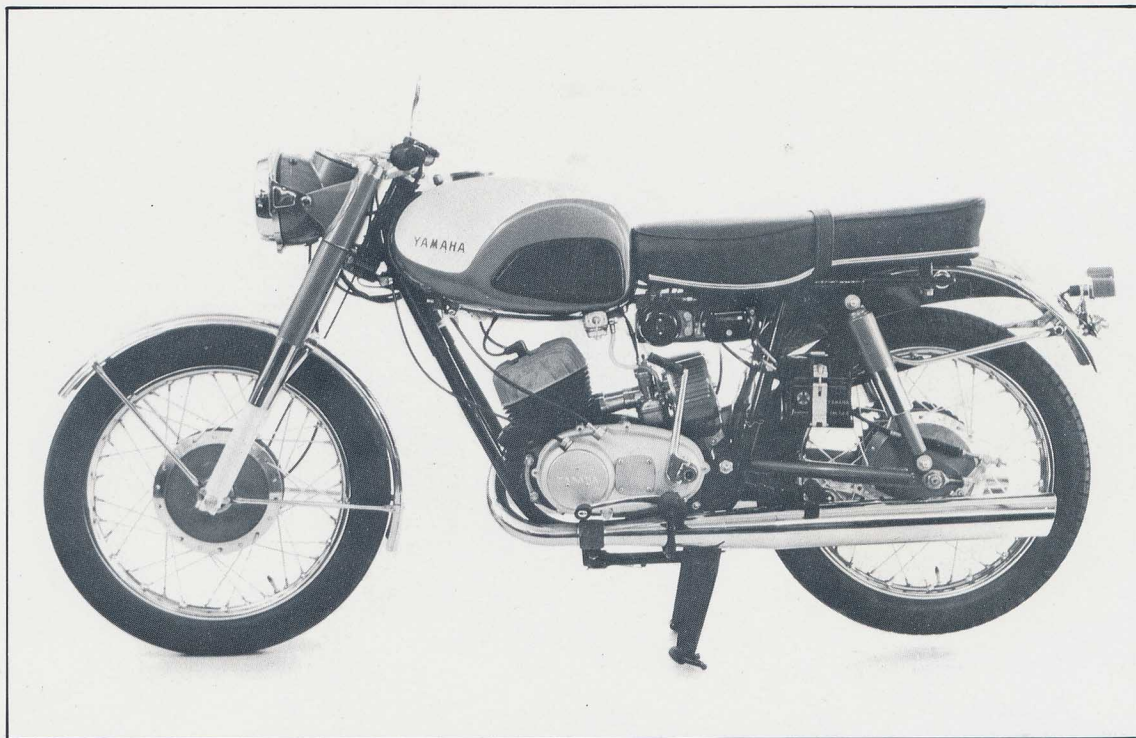
The machine that founded the Yamaha motor cycle dynasty – the sturdy 125cc YA1 of 1955.

factory has built and sold bikes that could be raced successfully 'straight from the crate', and as a result Yamaha machines have won more road races around the world than any other make, gaining the factory fine publicity into the bargain.

By 1965 production had risen to 244,000, split almost half-and-half between home-sales and exports. So, in just ten years, production had

increased more than a hundred-fold. A major technical step forward was the introduction of the 'Autolube' system. Realising that a major hindrance to two-stroke sales was the fact that riders had to mix oil with their petrol, and that not all service stations (especially in the United States) had this facility, Yamaha technicians set out to evolve a new system – the Autolube.

This consisted of an oil tank which fed lubricant to a pump, just like a four-stroke. The pump metered oil to the big ends, main bearings and cylinder barrels. True it was, and still is, a



The factory's first sports model—the twin-cylinder 250cc YDS1 with five-speed gearbox that went on sale in 1959.

total loss system, and the oil tank had to be replenished more frequently than a four-stroke, but it proved very reliable and did away with the need to mix oil with petrol at the filling station.

The first of several overseas factories was opened in Siam in 1966 to supply the expanding south-east Asian market and the following year Yamaha gained their first experience with four-stroke engines when they developed a two-litre,

overleaf: By 1969 Yamaha were so firmly established that they built this magnificent three-mile test-track near their main factory at Iwata.

six-cylinder, double overhead-camshaft sports car unit at the request of Toyota Motor. It was experience that was to stand the company in good stead when the time came to produce their own range of high-performance, four-stroke powered machines.

In 1967 Yamaha production overtook that of Suzuki for the first time (406,000 machines





against Suzuki's 402,000) and they have been ahead ever since. The next milestone was the launching of the first true trail bike – the 250cc single-cylinder DT1. This tapped a new market, especially in the States, and although the other factories responded with similar trail models, Yamaha established a lead which they have fought hard to maintain.

By 1969 Yamaha were so firmly established that they were able to build themselves a full-scale road-racing circuit near their main factory at Iwata. This is in constant use for testing all the roadster models, from humble 50cc mopeds to 180mph factory racing machines.

The range had been expanded to 20 models ranging from 50cc to 350cc by 1970, with production up to 574,000 machines, of which some 60 per cent went for export. That year Yamaha broke their two-stroke tradition by launching their first four-stroke motor cycle – the 650cc XS1 vertical twin, clearly modelled on the famous Triumph twins which had been so successful on the American market.

Production topped a million machines a year for the first time in 1973, leaving the rival Suzuki company way behind at 642,000 and closing the gap on Honda (1,836,000). During the 'seventies the Yamaha technicians concentrated on the development of a range of four-stroke models which were designed to pass the ever-increasing exhaust emission laws (particularly stringent in the United States, the company's most lucrative export market), and to be more economical than the two-strokes on which Yamaha's fortune had been based.

The earlier models, although technically

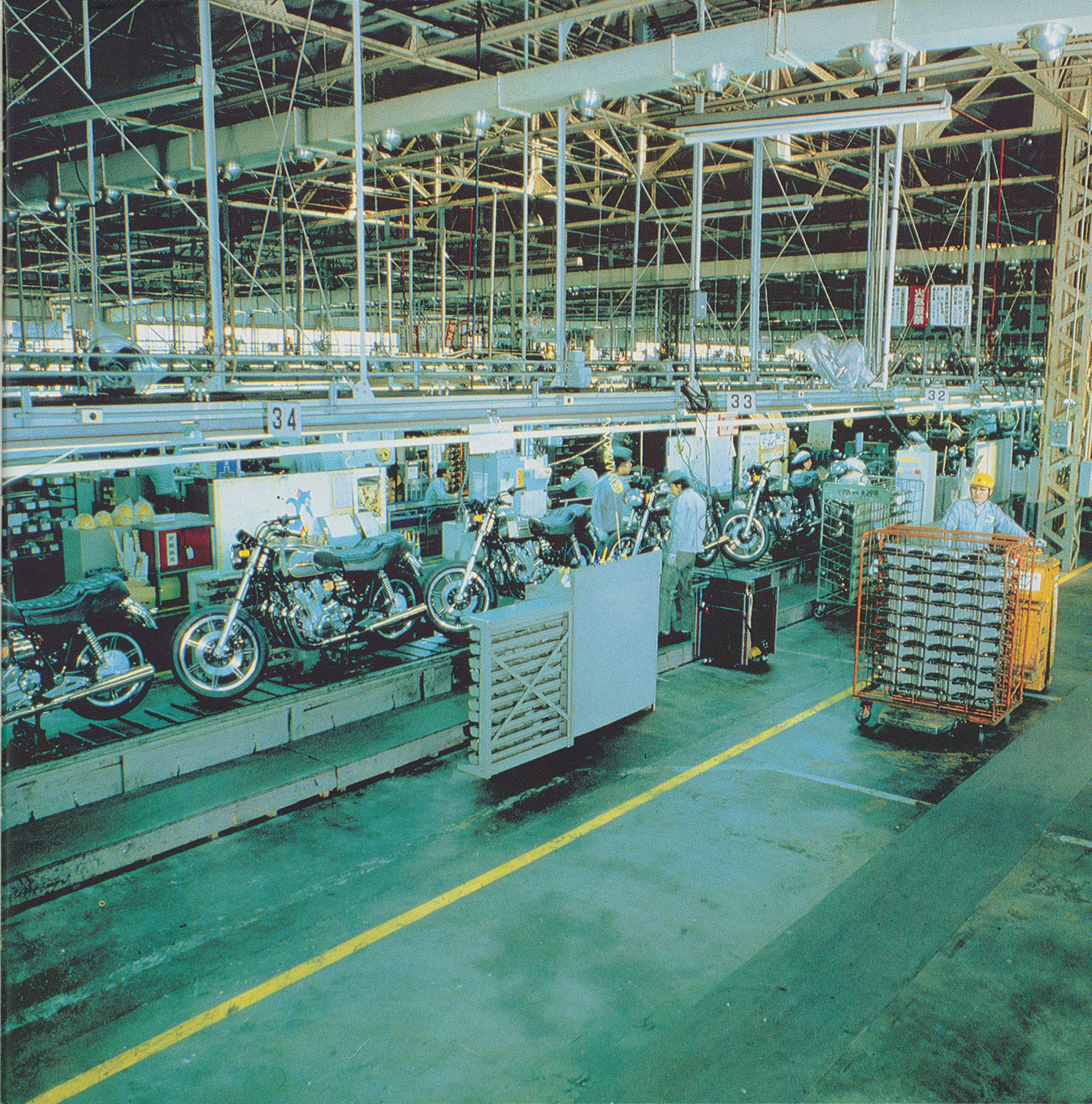
sound, lacked the styling to be a commercial success. These included the RX750 twin of 1972; the complicated and expensive, double overhead-camshaft, four-valve per cylinder RX500 twin (1973), and the shaft-drive, three-cylinder, double overhead-camshaft XS750 (1976). This was followed a year later by the weighty, four-cylinder XS Eleven, which, at just under 1100cc, was the largest (and certainly the heaviest) to be built by any Japanese manufacturer.

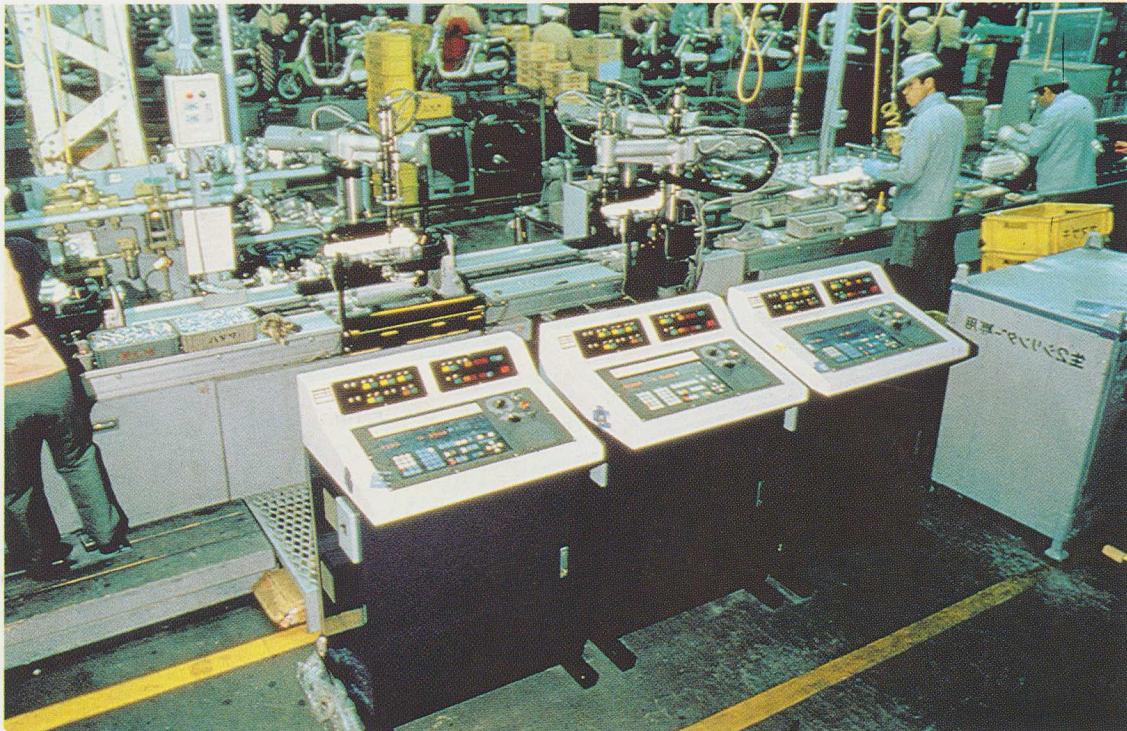
Other ventures in the four-stroke field were more successful. Notably the trend-setting, single-cylinder XT500 trail bike (1976), which found a ready market in Europe where the 'big singles' were still remembered with nostalgia, and the single overhead-camshaft XS360 twin.

Yamaha finally broke through to success in the larger four-stroke classes when they introduced the slimmer, more compact XJ range of four-cylinder models (ranging from 550cc to 1100cc) in the early 'eighties. Striving to meet every demand, the company also launched vee-twins (air-cooled 750cc and 1000cc models) followed by a sports, water-cooled, mid-weight machine, the XZ550.

Realising the long-term potential of the two-stroke engine, Yamaha continued to develop machines powered by these relatively simple but efficient units, concentrating on engines up to 400cc. During the 'seventies the RD range of twin-cylinder sports models was a tremendous success and the water-cooled versions (RD250LC and

A typical scene inside the Iwata factory showing four-cylinder machines on the assembly line.





Space-age technology – part of an automated assembly line used by Yamaha to speed production and improve quality.

RD350LC) that replaced them in the 'eighties (based on the famous TZ racing machines) carried on the good work.

Production, static in the early 'seventies, accelerated at the end of the decade to top the two million mark for the first time during 1980. The exact output was 2,214,000, with record export sales of 1,383,000.

Yamaha currently employ some 10,000 workers, with the main factory at Iwata producing 8800 motor cycles per day – one every 3.4 seconds! If you try to imagine the problems involved in making certain that all the right components are fed to the assembly lines at the right time, you will have some idea of the organisation it takes to achieve output like this. Just shifting and storing a day's production of 8800 machines is enough to make the mind boggle.