

KZ650 / Z650 History

The Kawasaki KZ650 as it was known in the USA, or Z650 as it was known everywhere else, was truly the 'Son of Z1' as both the Z1/900 and the Z650 were designed by Gyoichi "Ben" Inamura in the mid-seventies. The Z650 came from the idea of a bike that was not too heavy and not too big, but with the character of a sport bike. Important in the design of this bike was that it had the agility of a 500 with the performance of a 750 and have the capability to drive long distances without the rider getting too tired. It was indeed the best all-round bike that Kawasaki had released so far.

The premiere release took place in the UK in 1976 where the world press had the opportunity to see and test the machine for the first time. It was announced as a bike with the impressive performance of the 500 and 750 CC three-cylinder two-stroke engines combined with the suppleness of the Z900. As well as the 4 in 2 exhaust system, the huge cylinder head made you think that you have a Z750 rather than a Z650. The 64bhp was claimed with a dry weight of only 465lbs, making a top speed of nearly 120 mph possible. But more importantly, this new model handled like no other Kawasaki. For once all the available power could be used in relative safety.

During its lifetime the Z650 gained a reputation as a good and reliable around bike. It was built until 1983, and was followed by the liquid-cooled GPZ600 of Kawasaki.

The Z650 engine block itself looks like a smaller version of the block of a Z900, but it was a complete new design. Lots of things were re-designed to make the engine run smoother and make less mechanical noise. Plain bearings replaced the Z1 roller bearing supporting the crankshaft but more significantly a Hi-Vo chain was the main drive between the crankshaft and the transmission versus the direct gear drive of the Z1. These enhancements reduced manufacturing costs but also made it a quite comfortable bike too, even when driving long distances. A bike to have lots of fun with!! Even after more than twenty years!!

The Z650 underwent a few technical modifications (improvements), during the time it was built. A noise from the top end was the first problem that occurred. It turned out that the noise came from the cam chain idler gears. The Z650 only used two rubbers to dampen the idler gear shafts instead of four. The factory modified them to solve this problem. The camshafts themselves sometimes suffered from excessive end float and gave the bike its top end rattle, mostly on the left side of the engine. Not many problems occurred with the valves as they were quite reliable on unleaded fuel and the valve clearances rarely needed any adjustments, which was a good point because changing the shims meant removal of the camshafts.

The point where the tachometer drive cable enters the engine is known to be leaking quite often. An oil seal (taken from the Z1) stopped the leaking. The cylinders, pistons and rings are known to be reliable; however the rings can seize if the bike is left to stand for a long period of time. Like most Kawasaki's, the gearbox is noisy but sturdy with a loud 'clunk' being heard when selecting first gear. Later, the gear selector discs underwent modification.

A primary Hi-Vo drive chain from the crankshaft to the clutch input shaft is used on the Z650 without adjusters, causing noises from the bottom end after use. To replace the chain requires a complete engine strip. Another known problem was the outside mechanism of the kick-start assembly. It was modified a couple of times before the factory removed the kick-start from later models. An automatic cam-chain adjuster was introduced after the B2 in 1978. The endless single roller cam chain could stretch if the adjuster stuck and nothing was done to solve this. Later on the Hi-Vo type chain was fitted, but still the adjuster was prone to sticking.

The Z650 was prone to a few oil leaks from the top end. The two o-rings between the head and barrel were modified to stop deformation under pressure. So were the pins, which sat in the o-rings. With age, oil leaks could start from the camshaft end rubbers as well.



1976/1977 Z650-B1

STARTING FRAME NUMBER: KZ650B-000001

This four-stroke four-cylinder motorcycle boasted double overhead camshafts just like the bigger Z1 and Kawasaki claimed 64 BHP from the 652cc motor. Unlike the Z1, the 650 used a plain bearing crankshaft and used a primary drive chain instead of a gear driven unit. A single 245mm disk was used up front with a 250mm drum on the rear, more than enough to handle this relatively lightweight bike. It was offered in two colours, candy super red or candy emerald green.

1978 Z650-B2

STARTING FRAME NUMBER: KZ650B-027501

Very few differences were made to the B2. The front brake calliper was reversed to the back of the fork leg and the front master cylinder was changed from a round item to a triangular one. The charging system was changed from a three-phase system to a two phase and the regulator and rectifier was now a combined unit. The cam chain tensioner was changed to an automatic unit and a hazard switch was added to the left-hand switchgear. Needle roller bearings were now used in the swing arm instead of the previous model bushes and slight modifications were made to the carburettors to improve low speed operation. The fuel tap was replaced with a diaphragm type unit. There were also slight detail changes to the outer engine cases to incorporate the new lower case Kawasaki logo. The front footrests were now rubber mounted to combat vibration and the front forks were slightly modified.



1978 Z650-C2

STARTING FRAME NUMBER: KZ650C-010001

This was better known as the Z650 CUSTOM. The motor was a standard B2 unit but the custom was much modified elsewhere. Kawasaki fitted seven spoke alloy wheels with twin disks up front and a disk at the rear. The bold new graphics made this model stand out from the crowd and the C was a very good seller. There was a C1 model in the USA in 1977.

1979 Z650-B3

STARTING FRAME NUMBER: KZ650B-046201

The only difference over the B2 model was a change of graphics and a return to the original green and red colours. Sales once again picked up. The new lower case tank badges were also used. This time the red colour was described as candy persimmon red.

1979 Z650-C3

STARTING FRAME NUMBER: KZ650C-022801

The C3 used the new all weather sintered disk pads and braking in the wet was much improved. The bike was once again only offered in one colour, luminous dark blue. The rear calliper was changed to accept the new square sintered pads. The side panel badges were also slightly changed. This was also a C4.



1979 Z650-D2 (SR)

STARTING FRAME NUMBER: KZ650D-010601

It was basically a C3 with slightly 'chopper' styling. Chrome plating was used on the headlamp shell, clock lowers and chain guard. The rear tailpiece was dropped in place of a painted rear fender. The front exhaust downpipes were crossed over and the mufflers were made a bit shorter. The rear wheel was now a small but fat 16-inch item for that all-important custom look. There was also a D1 in 1978 and an E model, which were very similar but did not have as much equipment, having only one disc at the front and a drum rear brake.

1980 Z650-D3

STARTING FRAME NUMBER: KZ650D-026001

The only difference over the D2 was a change in colour and graphics.



1980 Z650-F1

STARTING FRAME NUMBER: KZ650F-000001

The F1 was basically a cross between a C and a B model. It had the alloy wheels but kept the drum brake at the rear instead of a disk. It was offered in three colours, blue, red or green.

1981 Z650-F2

STARTING FRAME NUMBER: KZ650F-007201

The F2 was much modified over the F1 model. It incorporated many of the larger Z750E parts. The motor was now finished in black and used transistorised ignition instead of points. The front end from the 750E was grafted on meaning a change to the brakes, front wheel and clocks. The kick-starter pedal and shaft was removed from the engine just like the Z750E. A passenger grab rail was also fitted.

1981 Z650-D4

STARTING FRAME NUMBER: KZ650D-028101

Basically a SR version of the F2 model.

1982 Z650-F3

STARTING FRAME NUMBER: KZ650F-012401

There was one major change for 1982, CV carburettors were fitted. The larger 32mm carburettors also needed the air box assembly from the Z750E/L models.

1983 Z650-F4

STARTING FRAME NUMBER: KZ650F-014301

This was the last of the 650 models, Kawasaki was now concentrating on the GPz range and there was no place for this previous best seller. The outer engine cases were similar to the Z750L model. There was also a Z650H model, which was a 'CSR' model with chopper styling.