

## Suzuki batteries

The '96 to present Suzuki DR650SE comes from the factory with a Yuasa YTX9-BS battery. This is a high-quality AGM (absorbed glass mat) type battery, which is sealed and maintenance free. AGM batteries last much longer than conventional flooded-cell batteries in normal service. Additionally they can withstand much greater shock and vibration, making them ideal for motorcycles, especially dual-sport models.

In most cases the original factory installed Yuasa YTX9-BS battery should last 3 to 5 years or more if properly maintained. While that is an admirable service life, nothing lasts forever, and since the DR650SE first came out in 1996, many owners will have replaced the original battery at least once, and others will be considering a replacement soon. Since the original battery performs so well, many would simply replace the stock Yuasa YTX9-BS with another of the same make and model. That is not a bad strategy, however if you are willing to spend a little more, I have discovered a replacement battery with *\*significantly\** higher output and equal or higher quality that can be installed as an option. Unfortunately if one is not careful, there are many lower quality and performance batteries on the market as well.

I found through experience that not all motorcycle battery manufacturers make a replacement for the original Yuasa YTX9-BS that matches the fit, quality and performance of the original. With so many manufacturers (including Yuasa) private labeling batteries under different names for various retailers or distributors, and many using the same or similar sounding part numbers, it can be very difficult to know exactly what you are getting when you order a "YTX9-BS".

For example, in 2001 I ordered a replacement battery over the counter at my local Suzuki dealer, specifying that I wanted the same battery that came new in the bike from Suzuki. Instead they produced a different brand, saying that it had identical specifications and that it was made by Yuasa even though it had a different brand name. While it looked similar (had exactly the same shape, size, and terminal configuration), there were subtle differences in appearance, which told me the battery was not actually made by Yuasa. While it seemed to perform acceptably upon initial installation, it rapidly deteriorated, lasting only 1 year before failing completely.

Since the DR650SE does not feature a kick-starter, when the replacement battery failed I had to resort to push-starting the beast. I can tell you from experience that push starting a big thumper like the DR650SE is not easy! Anything less than 5th gear caused the rear tire to lock-up immediately upon releasing the clutch, and a 5th gear start required a very fast push to turn the engine over quick enough to start it. Functioning only a year before failing is a dismal performance when compared to the 5+ years that the original Yuasa battery had lasted. In fact pending the purchase of another replacement, I re-installed the original (by this time 6-year old) Yuasa YTX9-BS back into the bike since it still started the bike.

After the unacceptable result of my first battery replacement, I vowed that the next replacement battery I installed would be an OEM Yuasa model. However, from my experiences with automotive batteries, I know that there are often several batteries available in a given physical form-factor, some with higher output ratings than others. After studying the full 2003 Yuasa catalog, I found that Yuasa makes at least one higher output battery that EXACTLY matches the size of the original, and two more that have even higher output ratings, and which are the same size as the original with the only exception of being slightly taller. The following table lists Yuasa replacement batteries which will fit the DR650SE. View in a monospace (preferably courier) font and the columns will be properly aligned.

1996 to present DR650SE Replacement Batteries:

Capacity	Size (in)	Size (mm)	OEM p/n	Cell	AH	CCA	L	W	H	L	W	H
8	120	120	YTX9-BS	AGM	5 7/8	3 3/8	4 1/8	150	87	105		
9.5	175	175	YTX12A-BS	AGM	5 7/8	3 3/8	4 1/8	150	87	105		
11	210	210	YTZ12S	AGM	5 7/8	3 3/8	4 5/16	150	87	110		
11.2	230	230	YTZ14S	AGM	5 7/8	3 3/8	4 5/16	150	87	110		

As you can see from the chart above, in particular the YTZ14S has a 40% greater AH (amp-hour) rating and nearly a 92% greater CCA (cold cranking amps) rating, while being exactly the same size except in height, and then it is only about 3/16-inch (5mm) taller! The question was would the slightly taller height cause any installation or interference problems? Upon inspection of the bike, I could tell that it would not.

In addition to having significantly higher output ratings, the YTZ batteries are sold as "activated and sealed". This means they are filled with acid and permanently sealed at the factory, instead of requiring the end user to fill and activate them as with the standard YTX series. In other words, the battery is ready to install right out of the box, and you never have to mess with acid filling and activation. Also important is the terminals on the YTZ batteries match the stock YTX9-BS, including the positive/negative orientation, so the stock battery cables attach perfectly with no modifications.

To test my theory I ordered and installed a YTZ14S in my '97 DR650SE and can report that it is indeed a drop-in installation requiring no modifications whatsoever to the bike. The only adjustment necessary was to add 1 or 2 10mm washers under each of the two battery retainer bolts, which space the retainer bar up slightly to compensate for the additional height. Most importantly, the additional height does not interfere with the seat, which features a generous relief on the underside specifically designed to clear the rear edge of the battery. The YTZ14S weighs only 8.6 lbs, which is 2 lbs. more than the stock YTX9-BS, which isn't bad considering the substantially higher output.

Once I had identified the battery I wanted, I found that ordering a specific make and model battery can sometimes be an exercise in frustration, especially one that is relatively new on the market and otherwise hard to find. For one thing I wanted an actual Yuasa brand YTZ14S, not anything similar or re-labeled. Fortunately there doesn't appear to be any equivalent battery from any other manufacturer, which helps to eliminate any undesirable substitutions.

Another problem is that many shops sell batteries by model fitment, meaning they will ask you what bike the battery is for. Of course when you tell them it's going into a DR650SE, they'll blow a fuse since the battery you are asking for won't show up in their fitment chart. As a solution, if you encounter somebody who sells batteries only by the bike fitment, merely tell them the battery is for a 2003 Honda ST1300, which is one of the only bikes that use this battery as original equipment.

Since it comes in at least the Honda ST1300, you can get one of these batteries from any Honda dealer, however the price will be about \$125 plus tax. The best price I could find on-line (where they knew about this model battery and actually had one in stock) was for \$106 at <<http://www.imotorcyclestore.com>>. There was no sales tax since I am out-of-state, however there was an additional \$12 charge for shipping. After ordering I received the battery via UPS in only a couple of business days, and it was exactly what I had ordered.

Since the Yuasa YTZ14S has nearly twice the cranking amp output of the original YTX9-BS, the bike cranks noticeably quicker and starts easier, especially when cold. I can say with confidence that the Yuasa YTZ14S is absolutely, positively, the BEST replacement battery on the market today for the '96 and up DR650SE!

Scott.