

Have the opportunity to review a new shock absorber product designed for Harley touring models. Always very happy to review a product 'Made in the USA'; and, this time, also a local-to-me manufacturer.

The manufacturer and product are both called 'Super Shox'. Since 1997, the manufacturer has been making, and improving, adjustable racing shocks (including adjustable from the cockpit) for sprint car racing. Gathered a ton of experience from those racing applications. He got a touring bike and wasn't impressed with the air suspension and set out to make something better based on his experience from the racing shocks with respect to valving and adjustability. In 2014 design began and for 2015 they offer the SR1-3000 adjustable, pre-loaded Super Shox for Harley FL models.



The test bike is a 2011 Ultra Limited FLHTK, with a rather 'robust' rider at 6' & 250; carrying typically full saddlebags, with cold weather gear on the right and wet weather gear & tools on the left and a Tour-Pak with all sorts of who-knows-what. The stock air suspension was set at 30 psi per the service manual's charts (250 being the break point for the 20-30 and 30-40 psi ranges, seemed to make sense to use 30). While this wasn't an uncomfortable ride, it could be harsh at times. Being air pressure controlled means having to adjust the pressure with a special pump so as not to blow the diaphragm and, even though a very small amount of air volume, was subject to temperature variations; and because of the small air volume, and very susceptible to any loss of air.



The Super Shoxs are hand adjustable by turning the knurled knob at the top, referencing a scale to ensure even adjustment side-to-side and to have a relative reading when adjusting for changing conditions (just finished reading a review of another shock made for the same market – the reviewer had to count the number of threads exposed to determine where the shock was set – hmmm...). Lower the number, the softer the ride; higher numbers for a sturdier ride. There are two minor downsides – first, it's a shame that the Super Shox have to be hidden behind the saddlebag. The look and finish are nearly art with the high gloss and polished finishes. Second, the saddlebags have to be popped loose to get a good grip on the adjuster – but, this is no worse than having to carry a special air pump and work the hose connector onto the Schrader valve buried behind the saddlebag. Included with the install instructions is a chart indicating a suggested starting setting for the Shox pre-load based on the weight of the load (the appropriate combination of rider, passenger and luggage) – up to setting '9' for 500 lbs of load (pretty much the load limit to stay under the Gross Vehicle Weight Rating); BTW - the review of the other shock mentioned you have to buy a different, more expensive version to go over 350 lbs of load – another hmmm...

Regarding the install – not much on a Harley will be as easy as the install of the Super Shox. The instructions are clear and concise. Need to remove the saddlebags and then the stock air shocks. The service manual warns about keeping the air shocks upright to not let the oil inside leak out (it is not replaceable), so be prepared to have something to put them in when removing that will hold them correctly – don't want to damage them, may be able to sell them. Recommended to have the bike solidly on a good jack so that you can raise or lower a bit to align the new Shox with the mounting holes when installing. Disconnect the air line and Schrader valve and remove (no more air pump – yeah!). Remove the two 1/2" bolts (3/4" socket), lock washers and washers from each side – retaining all for the installation.

When installing the Shox, the kit includes 4 spacers that are installed between the Shox and the mounting points. Using the bolts and washers removed earlier (and the spacers), mount the Shox in their place, with the adjustment scale facing the rear of the bike for ease of viewing (though it can go either way). Be sure to follow torque specs. Set the pre-load adjustment according to the chart for your normal load. Suggest you replace the saddlebags (since it is the way you normally ride) before taking for a test ride.

Most perplexing is the fact the Super Shox replaces both standard (13" long – like on the Limited) AND lowered (12" long – like on the Street Glide) stock air suspension systems. I'll be right upfront – I fully don't get the science of the valving, adjustable pre-loading, dampening, rebound and the other shock absorber terminology – but, I do understand math and 12" is shorter than 13". The guy who recommended these shocks to me is a wrench on a sprint car – hence how he knew about Super Shox. He put a set on his (lowered from the factory) Street Glide and loves 'em. The same model of Super Shox (currently, there is only one for motorcycle application) is also what was installed on the Limited.

Both the Street Glide and the Limited have center stands that are deployed without stepping off the motorcycle. The center stand manufacturer specifically sells different models of the stand for different suspension configurations – e.g. has one model for standard suspension (like the Limited) and a different model for rear only lowered (like the Street Glide). The Street Glide owner with the Super Shox installed indicated no issues with using the stand as intended – up onto the stand without getting off the bike; riding off the stand when ready to go. That left the wonderment – will the same model Shox (i.e. same length) allow the center stand to function properly on the Limited? Well, it does – up as easy as before, then ride it right off. And both riders feel their bikes have been lowered about ½" – both are more firmly planting their feet on the ground. Part of that science of shock construction and the difference between the Shox rebound characteristics with the pre-loaded spring versus that of the air suspension. Magic, it is...

Immediately after install, sitting on the bike doing a 'bounce' test. Very noticeable difference. Where the air suspension had little to no give, i.e. felt like the only bounce was from the seats (the bike's and yours); the Super Shox had noticeable give at the initial setting of 3.5. Giving the impression the road would be absorbed, with less transfer to the body.

First impression test ride (weather shortened as it was); with the Shox set at 3.5, per the chart, for the 'robust' rider; on probably the worst road in the county, on a frequently (unfortunately) travelled route – immediately noticeable was being more comfortable and, more importantly, more stable and in control. In two words – HOLY CRAP! Since the chart setting is a recommended starting point from which you make adjustments to dial in your most comfortable ride; decided to stop and reduce the setting to 3.0. An even smoother ride. What really set it off – realized after getting to the top of the drive, didn't notice the transition point from the roadway to the driveway which always jarred the back.

The manufacturer has the following recommendations for setting the Shox:

It's best to start off on the stiffer side of the settings based on the chart. Then if you feel the small ripples in the road, decrease by 1/2 setting on the scale until the ripples are minimized. This will give you the best balance between plush and bottoming resistance. If you are feeling jarring impacts over larger hits, then raise by 1/2 setting until that feeling is minimized. As with any shock system there is a compromise between bottoming and plush ride. The goal of this product is to have a smooth ride while minimizing the bottoming over large impacts.

Keep in mind, the lower the setting the more likely you are to bottom out. The higher the setting makes the ride firmer so you will be more likely to feel smaller bumps.

It's best to experiment to find what you like best over longer rides, where you are able to encounter more road irregularities, to get a better feel for what that setting is like. I normally try to ride at 50 to 100 miles on a setting before changing, unless it is noticeably uncomfortable.

Have a good ride

Just so happens (OK – not so much 'just-so-happens', it was part of the plan) – took the Limited with the new Super Shox installed on a four-day weekend trip. First part was the wonderful (that would be sarcastically) flat and straight; but, not very well maintained; roads of IL. The fun part was the hilly, twisty and, relatively speaking, decently maintained roads of Southern Indiana. While not a real long term test – certainly a good butt-in-the-saddle long ride.

The first 100 miles was ridden at the 3.0 setting. Nice riding, but decided again to reduce the setting to see if it could be even better. Reduced the setting just a little bit – basically dialing down until the reference line for 3.0 just disappeared from sight – so maybe 2.75. Made more of a difference than I thought it would. The Shox are effectively infinitely adjustable, not just to the half-step reference lines.

The road ripples disappeared. The lumps you see coming that you would subconsciously lean a bit forward for, well - gonna have to learn to ride again - don't need to do *that* anymore. The major hits that used to jar the bike, and your back – you still feel them, but nowhere near as harsh. Riding just under 400 miles each way Sat, going to; and Tue, coming home – simply don't feel as beat up as with the air suspension – even when varying the air pressure. Just simply a better ride.

The ride also gave a level of confidence of tire contact with the road not experienced before. Confidence to take corners faster and further leaned into. Didn't feel like there was any worry of the tire skipping as before. Digging into the turns, the rear stayed planted. A lot more smiles in the miles.

The Limited will be riding 4,500 miles in July, going out West – including Badlands, Rushmore, Custer, Spearfish Canyon, Yellowstone, Beartooth Highway, Going to the Sun Rd and a fair amount of super-slab to and from. Watch for an update in mid-August.

If you decide to give Super Shox a try, check their website - <http://supershox.com/motorcycle-shocks-for-harley-davidson/> - for pricing and ordering. Super Shox are not inexpensive, but definitely a case of you get what you pay for. Priced comparable to others, Super Shox are made in the USA and give you the ability to dial in the ride you want. Remember to tell Brian 'bogie sent me' - Brian will be happy to answer all your questions.

As always, any questions, please contact me.

Ride often, ride safe.

Respectfully, -bogie