

Hi everyone, It's a new year! Here's hoping for a great 2010, filled with new riding experiences and opportunities to make new friends, too. This month's newsletter has a really informative article on bike starters, supporting your local dealerships, and also takes a look at the Brazilian Star Riders Charity event. Happy reading!

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**My V-Star by Alex Ford** First, I like my V-Star 1100. Like most cyclists, I'm happiest when it is running perfectly and smoothly and I don't have too many pending projects on it. So far, that hasn't happened, so my, "freedom," which my machine helps to provide, at least so far, has some glitches in it.

What is it that connected me to ISRA? In my case, it normally resides in my garage. That's a place with a concrete floor and on one wall resides cupboards and next to them, some tool boxes that never seem to have enough tools in them. That provides me an excuse to buy a new tool, and while I'm at it, buy some other tool in case it might ever be needed in the future. The purpose of the garage during the colder months is to hold the bike (sometimes cars are parked in there). That bike is a 2005 V-Star 1100 Classic, California edition and it's pearl white, or whatever that particular color is called and it's stock. I like chrome and all of that, but I've stayed away from chroming the side covers and the front neck covers, mostly because I like to keep the engine as one of the two focal points of the motorcycle, because that's one of the pieces of the art of this machine that I like.



Having heard that the V-Star 1100 was originally designed by a person who did work for Harley, I'd like to know who that person is and talk to him a little bit. This is because the closest thing I ever had to a Harley is a Sportster with a chain after the evolution motor started, but before all the changes. Once, I tested a Harley semi-tourer and liked it and I liked the Road King. Strangely, I didn't like the Heritage Softail as much. From all of this, one can guess that I like the V-Twin configuration on motorcycles. I also like clean lines and classic-ness and air spaces in certain locations, because these have a way of saying, "freedom." Even though "clutter is bad," and, "less is more," sometimes artistically, and aesthetically, one just cannot say "no" to a little more chrome.

I was recently successful in talking a friend into buying a V-Star after he sat on all of them and researched them and then bought a Raider S. He didn't have a license, so he let me ride it home from the dealer.

That was totally fun. We were supposed to go riding today, but the weather has taken a turn away from spring conditions and there is fog and moisture everywhere and he doesn't want to get his new ride dirty. He's also awaiting his new seat and backrests.

Like so many of the now-partially-defunct V-Star 1100, the best thing I ever did was to put an oil relocation kit on my motorcycle. The second best thing I ever did was to obtain a Maxaire Pro Kit and then put it on myself and thus learn a little about carburetion and the importance of product builders and testers making available a kit that can be perfected by someone who is only a willing mechanic and not an expert one. I hear the kit also improves the sound of the V-Star 1100.

Each Star owner has his or her own fantasy. Mine is obtaining a black one and building a style chopper, while leaving my 2005 pretty much like and FLH style machine. That way I can look at each of the two machines and see to which of them I gravitate on a daily basis. I imagine the chopper would get the nod, though over long distance, I might choose the 2005. Who knows. Mine's currently a bagger with a clear windscreen from Yamaha, paint matched.

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## **Brazilian Star Riders Bring Holiday Cheer to Children**

In July 2009, I sent an email to my members here in Goiania about performing some service to our community. The idea was to pick an institution and help them with donations. Time passed and by the end of year, nothing happened so I sent another email and announced it for 2010. End of the story? No, God writes right for lines not so right.....

In the middle of December appeared to me an institution. A missionary that helps 40 children with food and some education was going to have to close because it had insufficient funds to stay open sent another email to my members explaining the situation and in about a week, we filled a van (kombi) with donations. To my surprise, everyone supported this effort with several donations: money, food, computer, shoes, clothes, etc. We set up a trip for delivery of the donations on almost 20 star motorcycles and 4 cars. When arrived at this institution, the children were waiting for us outside.





<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091726.jpg>

I felt it fun to arrange the components in a sort of &quot;order of assembly&quot;.

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Once everything is cleaned (I know I should have bought that parts cleaner! But you can do it with rags, brushes, and brake cleaner), the re-assembly and greasing must commence.

I began with the tailpiece. I used a Q-tip to put grease into the cavity of the bushing. I made sure ample grease was inside the cavity, but not so much that it would ooze out when the cap was inserted onto the armature end. Whenever you are greasing something, grease both contacting parts. This prevents a temporary lack of lubrication during initial startup. Put a light coat on the end of the armature as it is inserted into the tailpiece.

Be sure to place the two end thrust washers (Which also should receive a coat of grease) over the armature shaft tip. I cut up some fabric to act as a sort of fibrous sealing washer of this area. Only time will tell if it will actually work. <http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091820.jpg>

Next, I used some RTV (Room temperature vulcanizing) silicone to seal the portion of the starter where the + connector from the battery is connected. This is exposed to the elements and needs a good sealing. Notice the stamped marks on the tailpiece and the motor housing. Align these marks.

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I also assembled the brush insulator assembly, and the positive brush brackets, as well as the bolt that holds it all in. I tried not to get any RTV between the bolt head bottom and the positive brush assembly. RTV is a great insulator, but honestly, the mechanical compression of the two would negate any isolative effects of the RTV. I just was careful not to get any on those two surfaces anyway.

<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091805.jpg>

Next comes the hard part. But, it doesn't have to be that hard. This is what I did.

Before the brush plate is inserted of the commutator, align the brush plate as it goes onto the motor body. Using one brush at a time, in a circular motion (meaning going from one brush to the brush to the

right or left of it in a circle, not across), secure one brush against the plastic ring on the end of the commutator. Once all 4 brushes are making contact with the ring, be sure you apply ample force to prevent the brushes from popping back out. <http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091810.jpg>

Once you reach this point, you are almost done. Simply repeat the process for the plastic ring for the actual commutator. This makes it an 8 minute job instead of a 3-4 hour job. It reduces cussing and the chance that the entire assembly may become airborne and strike something in the room where you are working.

<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091813.jpg>

The rubber gaskets that go between each half of the motor on my starter had been long destroyed. I believe it costs \$30 to replace them both. If you have \$30, I recommend doing it. I used RTV silicone and two different sized O-rings. For this rear portion, you will need a thin O-ring. If the O-ring fails, I still have the RTV silicone.

<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091836.jpg>

Next, we have the actual starter output shaft and nosecone. Note the washer, it must be put around the shaft before it is inserted into the nosecone. Grease up the inside of the nose cone, but get no grease anywhere where the starter motor is inside the engine to prevent cross contamination of lubricants.

<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091845.jpg>

These parts are shiny and show no signs of wear, because I like to use good synthetic grease. When you replace the seal, use only the oil you use in your crankcase, and oil the seal up, being vigorous on the sealing portion that makes contact with the output shaft. With the shaft inserted into the nose cone, and the washer around the shaft before it was inserted into the nose cone, the bearing must now be tapped onto the shaft and into the nose cone. To begin this process, use the engagement gear to get the bearing started. This will ensure straight starting.

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Be careful to STOP tapping when the shaft starts to become flush with the engagement gear you will risk deforming the tip of the output shaft. When you get to this point, simply use a socket to tap the bearing the rest of the way. I originally used a socket too small, and it made contact with the shaft face. I thought I had done something wrong. Please be sure you are using a socket that will clear the shaft diameter, but still safely contact the inner race of the bearing. You may also put the large sealing O-ring around the nose cone. Use plenty of oil to do this, don't chip the O-ring.

Re-insert the plate that goes behind the planetary assembly. Make sure the washers are also around the collar of the output shaft of the armature. Also be sure you have greased the collar, and the bushing in the plate. Note that there is a groove in the plate that must correspond with the protrusion in the motor housing. The same with the outer planetary ring gear. Place the two small orbital gears on the output shaft planetary half.

I also used RTV silicone and a larger diameter O-ring to seal this half of the motor. Again, if you have the \$30, buy the proper sealing gaskets. I also heavily greased this area. There are many reasons that I hold for this. If you want to use less grease, go ahead. If I was you, I wouldn't waste my time doing this if I was just going to put in non synthetic grease. Why waste my time? Sorry, that's just me. I have had good experiences with Mobile 1, which is what I was originally using. The factory included a very small amount of grease, and the metal shavings I

found in it worried me.

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Now, you are going to try to align the two halves. This may take several tries, because they have to be inserted at exactly the right point to go together. Notice the marks in the motor case and the nose cone. Try not to overthink this. It took me two tries, but in the past has taken a few. Now, friends, you are done! That's it! Not that hard, was it.

<http://img.photobucket.com/albums/v237/wolfmangk/howto/starter/1217091933.jpg>

Now, the starter motor spins MUCH faster when cold, lending to much faster, easier starts.

Dave Wolf

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That's it for January's edition folks! See you next month!