

## Pre-1996 ST1100 40-amp Alternator Retrofit

I'm Alan Barbic and have a '91 ST1100 that has had a 40 amp alternator installed since spring of 1997 with over 25,000 miles of flawless operation. At first I only shared the achievement with a very small handful of close friends (Ron Major, who was truly amazed and sworn to secrecy, was among them).

I knew that the pre '96 ST1100 had a terribly anemic charging system. But it was only when a set of Ron Major Paa driving lights and 100 watt headlight bulbs were put into service that the magnitude of the problem became evident. The Paa's come standard with 110 watt bulbs. Ron insisted on sending a set of 55 watt bulbs because of the wimpy 28 amp alternator, and suggested that a voltmeter be installed to monitor the status of the electrical system. Needless to say the 55 watts were not nearly as illuminating as the 110 watt flame throwers. The only problem was that with everything in the on position the voltmeter showed imminent death would soon be forth coming by way of the battery.

I went in to my local Honda dealer (G.P. SPORTS 408-377-8780 Russ in Parts) to see if a retro fit of the new 40 amp alternator was possible ( every one, including Honda said, "no way" ). After checking all the part numbers I was convinced that my research would handsomely pay off. So I took the leap of faith and ordered about \$700 in parts ( no return on electrical parts ). When all came in and I started to measure and examine the pieces side by side I knew that I had hit the jackpot.

The following list is the parts needed to do this project

- #1 qty1 13411-MAJ-G20 /SHAFT \$44.68
- #2 qty1 11202-MAJ-G20 /ALTERNATOR BASE \$45.48
- #3 qty1 91004-MT3-003 /BEARING \$15.57
- #4 qty1 31100-MAJ-G41 /AC GENERATOR ASSY ( ALTERNATOR) \$503.22
- #5 qty1 91302-MM4-003 /O-RING \$9.32
- #6 qty1 32130-MAJ-G40 /ALTERNATOR SUB-HARNESS \$19.55
- #7 qty1 11214-MY3-000 /OIL PAN GASKET ( for 92 + ) \$18.18
- #8 qty1 11214-MT3-000 /OIL PAN GASKET ( for 91 ) \$12.45
- #9 qty3 95701-08070-00 /FLANGE BOLT 8X70 \$1.96 each
- #10 qty1 55 or 60 amp fuse set up ( in line or a block with spade connections )
- #11 qty1 4-5 feet of #12 wire

### WARNING

THE FOLLOWING IS NOT FOR THE MECHANICALLY CHALLENGED

This will not be a step by step hand holding session. Use a shop manual to fully comprehend all that is involved to do this. Of course all the highest standard of care and practice will be applied regarding all electrical connections, routing and mechanical aspects.

You will need to pull the fuel tank, swing arm, exhaust system, oil pan

and the alternator assy ( take it apart, i.e.; remove the stator for clearance to pull the shaft assembly out ) .

THE MOTOR DOES **NOT** NEED TO BE REMOVED FOR THIS INSTALLATION!

Using the new #1 Shaft , #2 Alternator base, #3 Bearing and #5 O-ring take the remaining applicable parts from the old alternator assy and assemble and install into the motor per the manual.

Take the new alternator assy apart at the middle put the rear half ( the part with the stator-regulator-brushes ) aside for now. Install the other half on to the motor and then assemble the alternator with the remaining half . Use the 8X70 flange bolts in #9 to finish the alternator installation.

Install the sub-harness #6. The "2P" connector ( small ) wire of the new sub-harness is a direct replacement-connection to the existing in main wiring harness. The larger wire will need to be extended and/or totally replaced to reach the new 55 or 60 amp in line fuse ( mine is located on top of the existing fuse block next to the battery ) and from the new fuse go directly to the battery. REMOVE THE OLD REGULATOR-RECTIFIER ( Don't worry about it's plug connector at the wiring harness )

Now assemble every thing that is still in need of assembly and no longer lust for a '96 or newer ST1100. This will make a huge difference in your ST's electrical capability. Lights, radios, radar detectors,electric vests-chaps-gloves and more as you desire. Enjoy