

INSTALLATION INSTRUCTIONS

Honda ST1100
Horizon-ST Multi Adjustable Handlebars
P/N: HST01060

***IMPORTANT:
PLEASE GIVE CUSTOMER ENCLOSED INFORMATION!***



Thank you for your purchase of our HeliBars®. They are designed to increase your long distance comfort and improve the handling of your sport motorcycle, and we feel confident you will enjoy them.

Your HeliBars are designed to fit your motorcycle with little to no modifications needed to your stock cables and hydraulic lines. In order to achieve this fit, we do not simply increase the height at the fork tube/triple clamp area. If we were to mirror the angle of your stock handlebars, the HeliBars would not fit and clear your stock equipment, and lock to lock steering clearance would be impossible.

If you hold up the HeliBars and compare it to your stock handlebar, the difference may not be readily evident. One test we can suggest is to take your stock handlebar, and the corresponding HeliBars, and set them both on a flat surface. You can see the angle difference. Then install the left HeliBars, following the instructions. Walk around the front of your bike and look through the windshield. You should see a noticeable difference between your stock handlebar and the HeliBars. Finish the installation, and try them out. We think you'll like them!

HeliBars INSTALLATION

**IMPROPER INSTALLATION COULD RESULT IN SERIOUS INJURY OR DEATH.
HAVE A QUALIFIED MECHANIC INSTALL YOUR HeliBars.**

IF WE HAVE NOT INCLUDED SPECIFIC INSTRUCTIONS FOR YOUR MOTORCYCLE, THEN THE INSTALLATION IS SIMPLY A REVERSAL OF THE DISASSEMBLY PROCESS. **NOTE THE LOCATION OF LINES AND CABLES. BE SURE TO CLEAN THE FORK TUBES BEFORE INSTALLATION!!

!! CAUTION !! MAKE SURE THE HeliBars ARE FULLY SEATED. TIGHTEN BAR END DAMPER WEIGHTS FIRMLY. AFTER INSTALLATION, MOVE BARS LOCK TO LOCK AND CHECK CLEARANCE OF: 1.CABLES 2. HYDRAULIC LINES 3.WIRES 4.FAIRING 5.FUEL TANK. TORQUE ALL HARDWARE TO MANUFACTURER'S SPECIFICATIONS.

IF YOU HAVE INSTALLATION QUESTIONS, PLEASE CALL 1-800-859-4642.

HELI MODIFIED, INC. ASSUMES NO LIABILITY FOR ANY INJURY OR LOSS OF PROPERTY WHICH MAY RESULT FROM IMPROPER INSTALLATION OR USE OF ANY HeliBars.



WARRANTY / RETURN POLICY

We make every effort to build a quality product so you can fully enjoy your riding experience. Thank you for your order.

HeliBars® may be returned for defects in materials and workmanship within one year from the date of shipment to the original purchaser, in which event the purchaser may receive a replacement set of HeliBars.

If within thirty (30) days of the shipping date you are not satisfied for any reason, you can return the HeliBars. Return policy is valid for original purchaser only. If HeliBars are purchased from a vendor other than Heli Modified, Inc., customer must contact vendor where purchased regarding returns. Refund will be extended to original purchaser only. There are no other warranties which extend beyond this.

Conditions of this 30 day return policy:

1. Bars must not be used as a tie down point. (See attached 'Trailer Instructions').
2. Bars cannot be damaged, dented, or altered in any way.
3. Bars cannot be overtorqued.
4. Refund will be for product purchase price only, and credited to original purchaser only.
5. Product must be returned with all original equipment, documents and in original packaging. There must be no physical damage caused by the customer or by carrier.
6. A Return Authorization Number must be obtained from us before you return the product.

We reserve the right to charge a re-stocking fee of up to 25% if the above criteria are not met.

THERE ARE NO FURTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. By accepting this product, the consumer agrees to arbitrate and litigate any controversy in the State of Maine, and under the laws of the State of Maine.

HELI MODIFIED INC. ASSUMES NO LIABILITY FOR ANY INJURY OR LOSS OF PROPERTY WHICH RESULT FROM IMPROPER INSTALLATION OR USE OF ANY HELI BARS. ALL HELI MODIFIED, INC. PRODUCTS SHOULD BE INSTALLED BY A QUALIFIED MECHANIC. IMPROPER INSTALLATION MAY CAUSE DEATH OR INJURY.

Ride Safe and Enjoy!





Honda ST1100 Horizon-ST Replacement Handlebars Installation Instructions

P/N: HST01060

2 - 5" Taller ~ 4 - 6" Rearward ~ 0 1 1/4" Wider

Installation Overview:

Over the years many different handlebar alterations have been applied to the ST1100. HeliBars manufactured and offered the MTS adjustable handlebar system. Several other aftermarket companies offered taller riser systems in an attempt to increase comfort by improving the ergonomics of the machine. In order to install many of these products, the stock plastic handlebar cover had to be removed. The following instructions for installing the Horizon ST are for an un-altered bike with all factory pieces intact. If your ST1100 has MTS HeliBars previously installed, your plastic handlebar cover has already been removed.

IMPORTANT!! If aftermarket risers have been installed, they **MUST** be removed and the machine returned to factory configuration. Attempting to install the Horizon ST system on altered height risers could be dangerous and available cable slack would not allow safe operation.

Heli Modified expressly discourages the installation and use of the Horizon ST handlebar system on Honda ST1100's with modified handlebar mounting clamps. If the stock mounting clamps have been removed, original Honda factory pieces must be re-installed.

1. Remove the handlebar plastic cover from the handlebars. Remove the screws from the seam on the sides (3 screws per side) and the two screws from the lower back. Separate the cover into its two halves and release the lower clip from the forward piece in front of and below the ignition housing. Remove the metal strap from the top triple clamp that mounted the cover. **(See Photo #1)**
2. Remove the wire stay that holds the two hydraulic lines, throttle cables and choke cable in front of the top triple clamp by loosening and removing the two 6mm bolts. Use a 10mm wrench **(See Photo #2 & 3.)**
3. Remove damper weights from the ends of the handlebar. This machine has Throttle Meister bar ends fitted. Stock is similar. **(See Photo #4)** Use a large phillips screwdriver and hold the damper weight from rotating while loosening the screw
4. Install clutch and front brake hydraulic line extenders before the stock bars are removed. Leave all controls in place at this time.

CAUTION: Brake Fluid is caustic and will damage paint and plastic surfaces.
Protect all of these surfaces when working with brake fluid.

- 4a. Leave reservoir covers in place at this time.
- 4b. Place rags under master cylinders.
- 4c. Remove banjo bolt and washers from clutch master cylinder. Very little brake fluid will leak out of the master cylinder. (See **Photo #5**) Use a 12mm wrench.

READ ENTIRE PARAGRAPH BEFORE PROCEEDING!!

- 4d. Install one of the hydraulic line extensions as shown in (**Photo #6.**) Place a washer on either side of the banjo fitting and tighten using a 12 & 14mm wrench. Check that the upper banjo fitting is positioned as shown in (**Photo #7**) before tightening. Tighten the bleeder located on bottom of the banjo bolt after removing the rubber cap. Re-install cap use an 8mm wrench. Do not overtighten. See (**Photo #7**) for rotating position of the upper banjo bolt before tightening.
 - 4e. Install extension banjo fitting to master cylinder as shown in (**Photo #7**) using the factory banjo bolt and two sealing washers. Make sure the old washer is removed from the master cylinder as they tend to stick in place.
 - 4f. Repeat steps 4d & 4e on the front brake hydraulic line. See (**Photo #8**) for positioning of front brake banjo. Hold fitting down against tab while tightening. Push the extended brake lines down in front of the top triple clamp and out of the way as shown in (**Photo #9**). The clutch and brake hydraulic lines will temporarily cross over each other. Use a rag to protect the dash.
5. Remove stock handlebars.
- 5a. Remove the factory cable ties by depressing the short tab. Remove them to free control housing wire looms on the left and right sides (see **Photo #10**).
 - 5b. Remove clutch and front brake master cylinders from the stock bars. Use an 8mm socket. Disconnect the two spade connectors from both master cylinders micro switches. (See **Photos #11 & 12**)
 - 5c. Loosen and remove the 2 phillips head screws that hold the left side control housing halves together. Note that the longer screw goes in the front hole. Carefully separate the two halves and free the cable from the choke lever. (See **Photo #13**) Set the control housing down on the rag.
 - 5d. Loosen and remove the two screws from the throttle housing. Note that the longer screw goes to the rear hole. Lift the top half up off the handlebar, push down on the lower half to disengage the locating pin and slide the throttle sleeve out some but do not try to remove from the handlebar. (See **Photo #14**)
 - 5e. Loosen and remove the 4 screws that hold the handlebar mounting clamps in place. (See **Photo #15**) Note that the caps have an orientation mark. Photo shows after market caps with no marks. Remove the stock handlebar by withdrawing it from the throttle sleeve.
 - 5f. Remove left grip. (**Photo #16**) shows a long thin screwdriver slid down inside the grip. Pour some rubbing alcohol down along the screwdriver shafts, start to twist the grip to spread the alcohol and the grip should slide off.
6. Remove the choke cable from the left side control housing by rotating the elbow counter clockwise looking up from the bottom. (See **Photo #17**)
7. Pull the choke cable back under the top triple clamp so it now comes out behind the left fork tube. This



generates the needed slack for this cable. (See **Photo #18**)

8. Release the two throttle cables from the throttle sleeve.

8a. Pick the throttle sleeve up while holding the bottom half of the control housing and rotate the throttle sleeve as shown in (**Photo #19**). Remove cables.

8b. Remove throttle cables from the control housing. Use a 14mm wrench and loosen the two nuts and let them slide down the steel elbows. (**See Photo #20**) This photo shows the rear (push) cable removed from the housing. Before removing the pull cable, measure the amount of the threads showing. (**See Photo #21**) and write it down. To remove the forward (push) cable, simply un-thread it from the housing by rotating the elbow clockwise (looking down). Remove cable.

8c. Pull both throttle cables back out from under the triple clamp so they now come out behind the right fork tube (**See Photo #22**).

8d. Reverse steps A & B. Re-install throttle cables into the throttle housing. Install the forward (pull) cable first. Thread it in until the same amount of threads are showing when measured in Step 6. Thread nut back on but do not tighten at this time. Install the rear (push) cable into the housing and thread its nut on but do not tighten. Carefully engage cable ends into the throttle sleeve and position sleeve back into place. Reposition top cover and install screws (longer screw goes in the rear hole) but only catch several threads at this time. Leave the screws very loose!

9. Install the HorizonST™ lower assembly **see diagram on page 17**.

9a. Position the lower Horizon mounting tube knurls into the mounting clamps. Install caps and screws

and adjust mounting bar so the same amount of knurling is visible on the left and right inner sides. (**See Photo #23**) Do not tighten cap screws yet.

9b. Adjust bars rearward at about a 45° angle toward the rider. This is a good starting point. Tighten the cap screws only enough to keep the bars from moving at this time. Check (**Photo #24**) for proper orientation of the bars. The large 1st pivot clamp pinch bolts should be facing the fuel tank. If not, flip the assembly over and repeat steps a & b.

10. Install the left and right handlebar tubes into the upper pivots (pivot 2) see diagram on page 18.

10a. Remove the two inner pinch bolts. Use a 6mm allen wrench. (**See Photo #25**) Make sure the outer two are loose but do not remove.

10b. Place the front brake master cylinder and brake line to the inside of the handle riser. (**See Photo #26**)

10c. Locate the right handlebar tube. It is clearly marked. Insert the damper end (6mm threaded end) of the right handlebar tube into the throttle sleeve. Align dowel located on the lower half of the throttle housing with the locating hole in the right bar. Tighten the two screws. (**See Photo #27**)

10d. Insert the radial groove end of the bar into the pivot clamp until it is flush with the inner face of the upper pivot clamp. Insert M8 screw that was removed and thread it down. Adjust the throttle control housing position by rotating handlebar tube and then lightly tighten both screws at this time. (**See Photo #28**)

Continued on page 19



Photo Booklet can be removed to assist in install.



Photo # 2



Photo # 4



Photo # 1

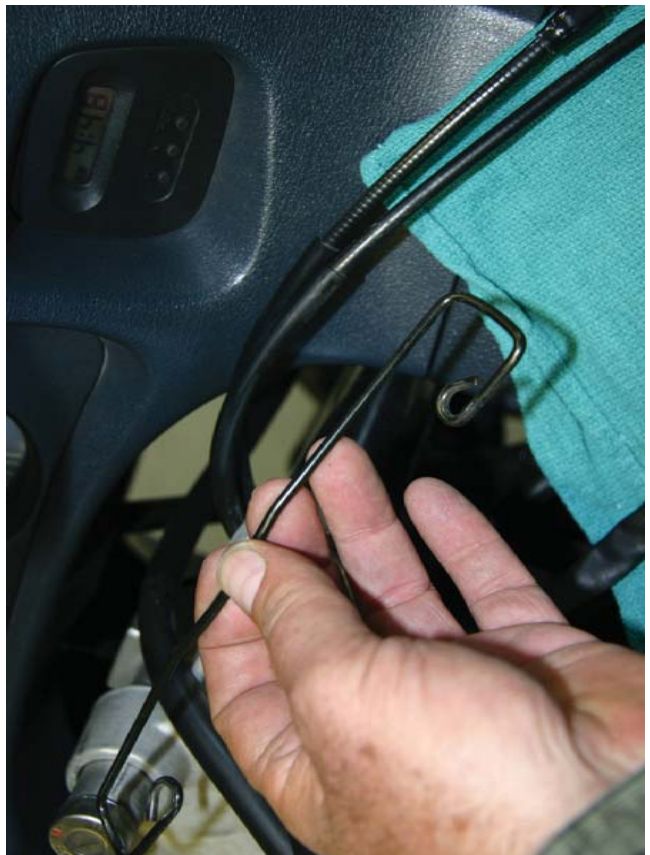


Photo # 3





Photo # 6



Photo # 8



Photo # 5



Photo # 7





Photo # 10



Photo # 12



Photo # 9



Photo # 11





Photo # 14



Photo # 16



Photo # 13

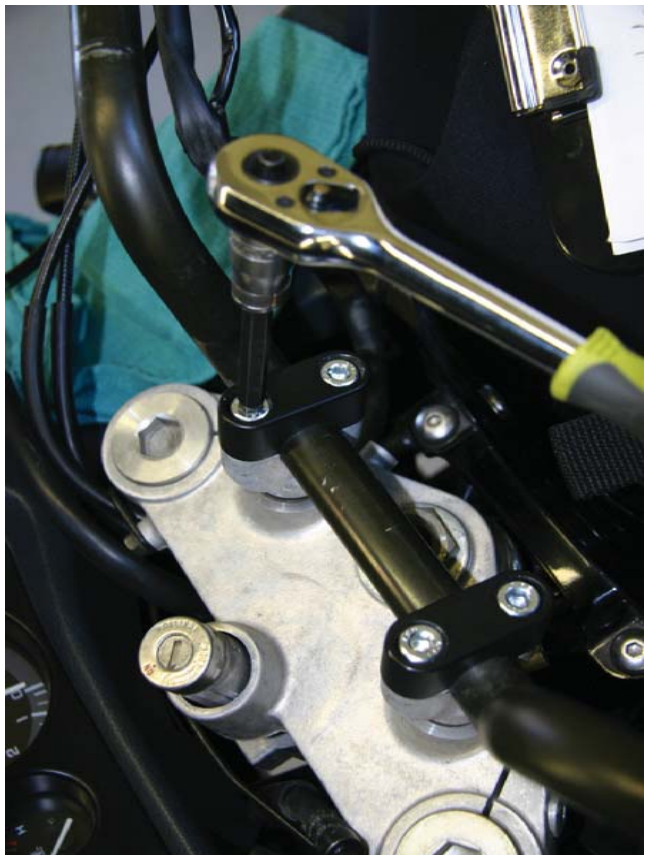


Photo # 15





Photo # 18



Photo # 20



Photo # 17



Photo # 19





Photo # 22



Photo # 24

Pinch bolts facing the tank.



Photo # 21



Photo # 23





Photo # 26



Photo # 28



Photo # 25



Photo # 27





Photo # 30



Photo # 32



Photo # 29



Photo # 31





Photo # 34

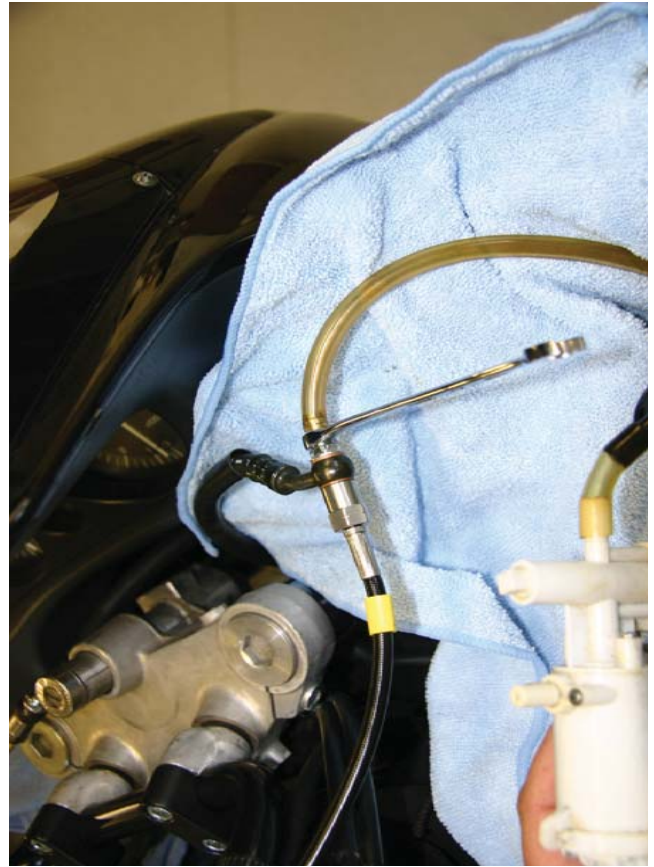


Photo # 36



Photo # 33



Photo # 35





Photo # 38



Photo # 40



Photo # 37



Photo # 39





Photo # 42



Photo # 44



Photo # 41

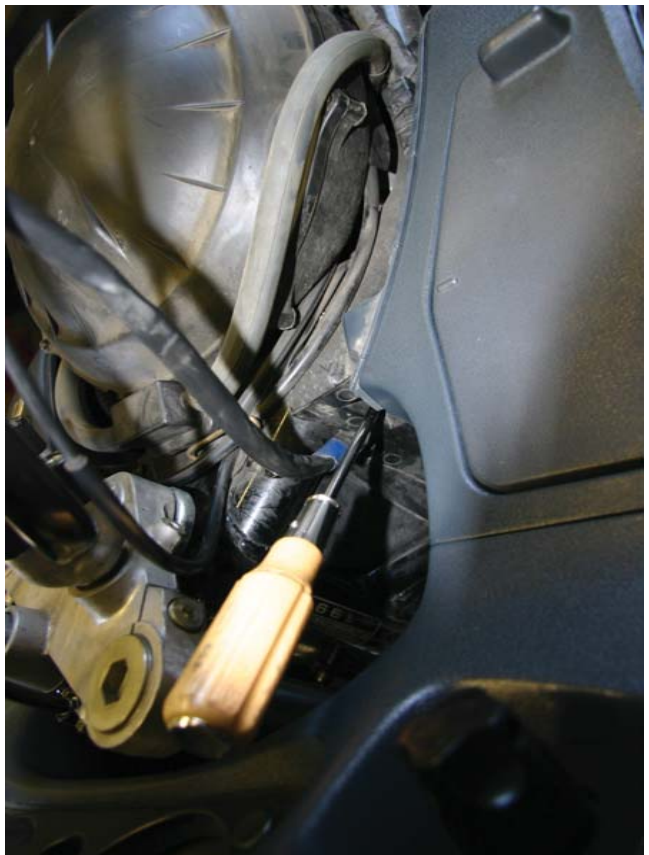
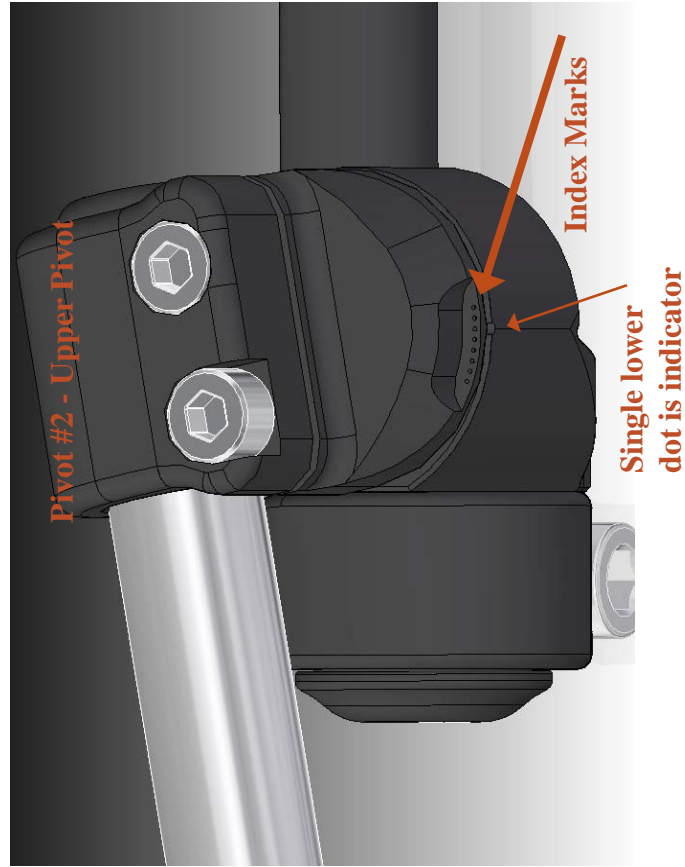
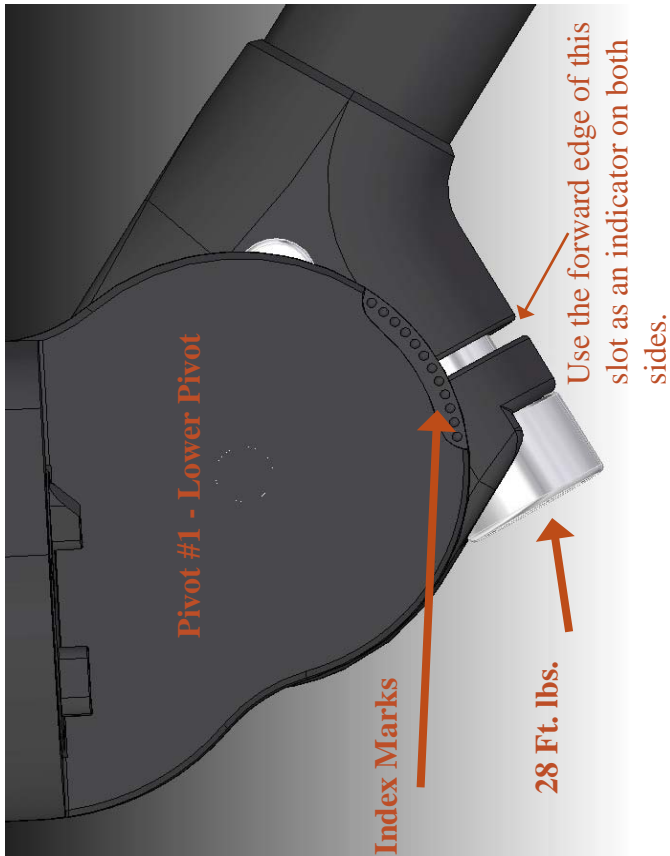


Photo # 43

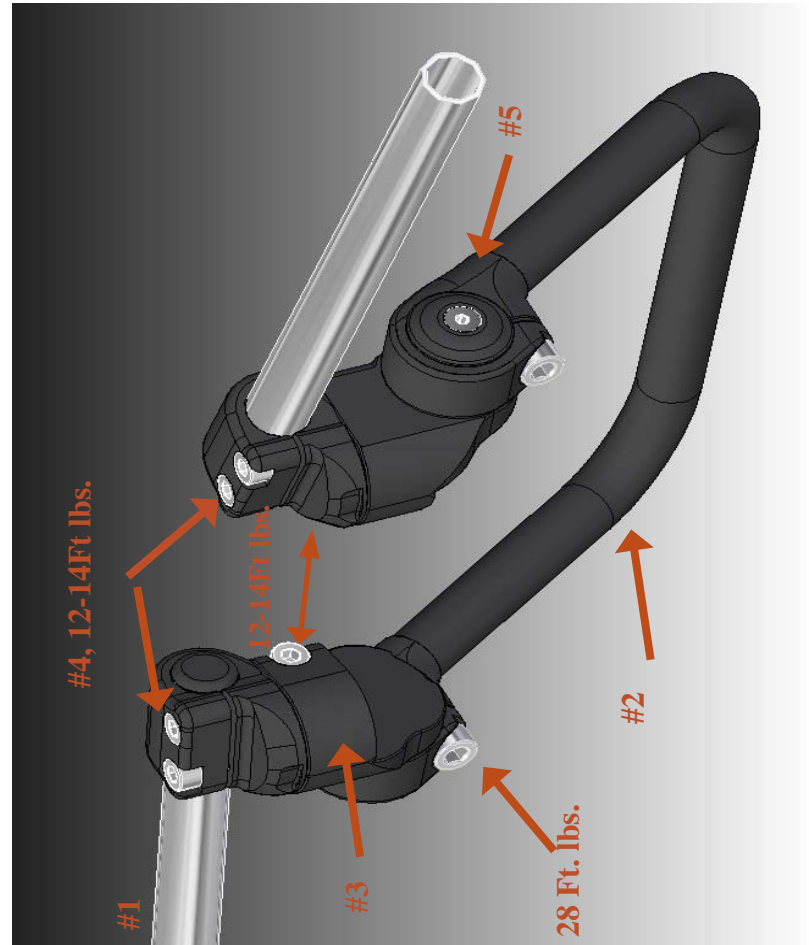




A. On the lower and upper pivots, match the settings on both left and right side so adjustments will be mirrored.

B. Make forward and back adjustment of the entire handlebar system by loosening the 4 8mm screws that clamp the handlebars to the fork. As detailed in **Photo #15**. After Adjustment is made, torque the 4 screws to 14 ft lbs.

1. Handlebar Tube
2. Lower Assembly
3. Pivot 1
4. Pivot 2
5. Pivot Clamp



10e. Re-attach the two wire connectors to the front brake master cylinder micro switch. (See **Photo #11 & 12**). Mount the front brake master cylinder to the right handlebar and make sure the up marks are positioned at the top of the cap. Install both 6mm bolts and tighten the upper bolt first. Make sure the master cylinder does not contact the handlebar pivot. (See **Photo #29**) Leave at least a 1/8" gap. Install the black plastic cap provided on the inner bar end.(See **Photo #30**).

10f. Place the clutch master cylinder and line to the inside of the handlebar riser as in Step B. (See **Photo #26**)

10g. Install the left handlebar tube into the left upper pivot bore as per the right side. Make sure bar is flush with inner face and that the pinch bolt is fully threaded in place. Rotate bar so the left control housing locating hole is positioned on the bottom. Lightly tighten. (See **Photo #31**)

10h. Thread choke cable back into left control housing. (See **Photo #32**) Remember, the choke cable has been repositioned behind the left fork tube.

10i. Slide the choke cable lever ring over the left handlebar tube, engage the choke cable end (See **Photo #33**) and close the two halves, while pushing the choke lever back towards the rider. It will click back into place when the locating dowel is positioned into the located hole on the left bar. Put the longer screw in the forward hole and tighten both screws. (See **Photo #34**)

10j. Install the clutch master cylinder as per the front brake procedure. (See **Photo #35**) Make sure master cylinder has a small gap between itself and the upper pivot clamp. Tighten after adjusting lever angle.

10k. Install left grip. Lubricate the inside of the grip with rubbing alcohol, slide the grip on and adjust so the outer end of the grip is flush with the end of the handle bar tube. Use compressed air to dry out the alcohol and just wait for it to evaporate.

10l. Install damper weights.

11. Bleed the clutch and front brake master cylinders at the bleeder valve located at the bottom of the hydraulic line extensions. (See **Photo #36**). **CAUTION:** Place protective rags over the fairing and do not allow the fluid to contact the powder coated handle bar components as it will dull or destroy the finish. After both master cylinders are bled, tighten bleeder valve, clean them off with a paper towel and replace rubber caps. Check reservoir fluid level.

12. Use the two p clips provided and the two flange head bolts removed when the cable guide wire stay is removed from the front of the top triple clamp. Attach the clutch lines with the p clip as shown in (**Photo #37**).

13. Use 2 cable ties provided and attach one around the top of the left fork tube and the stock clutch hydraulic line and tighten. (See **Photo #37**) Place the second one around the fork and hydraulic line as shown in (**Photo #38**). Place a third cable tie around the clutch hydraulic line and the fairing mount to keep the line from getting stuck between the steering stops and tighten using the 2nd flange head bolt from the stock cable guide.

14. Place the second p clip around the front brake hydraulic line as shown in (**Photo #39**). The stock line must be positioned as shown going under the ignition bottom and back around its front.

15. Place a cable tie around the right fork tube and the stock front brake hydraulic line as shown in (**Photo #40**). Make sure the hydraulic line does not contact the steering stem or the fairing mount, before fully tightening

16. Gain slack in the right side control housing wire loom by gently tugging forward on it. To gain additional slack in the left side control housing wire loom:



- 16a. Remove saddlebags, seat and both side covers.
 - 16b. Loosen and remove the two 6mm bolts (10mm Hex Head) on either side of the rear of the fuel tank cover. Remove the steel washer/spacers as well. See (Photo #41).
 - 16c. Loosen and remove the two socket head cap screws behind the forks. See (Photo #42). Remove the tank cover.
 - 16d. Loosen and remove the single screw that holds the left side trim cover in place. Move the cover forward but do not remove. See (Photo #43).
 - 16e. Place a flat medium size screwdriver in the slot located on the top of the factory clamp and turn the screwdriver to disengage the clamp. See (Photo #44). Pull as much slack forward as possible from the left side wire loom. Re-connect the clamp. Re-install the trim cover by reversing step 16d.
 - 16f. Re-install tank cover, side covers, saddlebags and seat.
 - 16g. Re-attach wire looms to the handlebar riser tubes with the factory cable ties.
17. Read and understand the adjustment and torquing guide supplied with these installation instructions.

CAUTION:

There are a total of 12 screws that must be verified as being torqued before machine is ridden.



IMPORTANT INFORMATION ABOUT POWDER COATED HELIBARS

HeliBars® are finished with a polyester powder coating. The polyester is recommended for outdoor use because of its excellent UV resistant quality; if we were to use an epoxy it would tend to fade and chalk pretty quickly when exposed to sunlight and UV rays.

Care must be taken during installation because the finish can be scratched by the sharp surfaces of the controls and master cylinder clamps. When mounting the master cylinders to bars, do not let them move around the bars with the caps loose. Mount them in the proper position and hand tighten the screws until final adjustments are made; in this way you will lessen the possibility of scratching.

NOTE: Powder coat finish is not indestructible, there are chemicals which may react negatively when applied to finish. Brake fluid may cause deterioration of the finish. We do not recommend the use of acetone or similar chemicals for cleaning purposes. We would recommend the use of an over-the-counter adhesive remover (such as Goo Gone) for the removal of any extraneous material. Please read labels directions for any cleaning/polishing product before use. If you have any questions regarding the use of any over-counter-products with the HeliBars, please call us before applying them to the powder coated finish.

If care is taken during installation, your HeliBars will continue to look as good as when they were new. They will look great for years to come with a bit of wax and careful cleaning. Thank you for your purchase, ride safe and enjoy!

Sincerely,

Harry Eddy, President



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Trailing with HeliBars®

HeliBars clip ons and handlebars must not be used as the primary holding points for tie downs while trailering. *As with your stock bars* applying extreme force to the ends of the bars can bend the bars or rotate them on their mounts.

Use a wheel chock and pull the machine down and forward using soft ties or similar, attached to the lower triple clamp.

Bars should only be used as secondary attachment points to steady the motorcycle from lateral sway.

Failure to follow these guidelines can cause damage to the bars and the motorcycle, and may also void our warranty.

