

2004-Up Sportster Fat Tire Instructions

Before beginning installation of your Fat Tire Kit, we strongly advise acquiring a Harley Davidson Service Manual to assist you in the tear down and reassembly of your motorcycle. Important torque specification, clearance and alignment specifications are listed in the manual. If you are not an experienced mechanic or doubt your own ability to perform these basic tasks, we suggest that you may want to take your bike to a reputable shop for the work.

Take time to familiarize yourself with the parts included in the kit before beginning.

1. Offset pulley
 2. rear axel, washers (2) and nut
 3. rear axel adjuster plates (2)
 4. 1/4" x 2-1/2" Allen bolt (1)
 5. 1/4"x 2 -3/4" Allen bolt (1)
 6. 3/8" x3" Allen bolt (1)
 7. 1/4 x 3/4" spacer (2) [pulley cover]
 8. 1/2"x3/4" spacer (1) [pulley cover]
 9. 1/2" x 7/16" spacers (2) [upper shock mount]
 10. swing arm
 11. fender
 12. tire.
 13. instructions
1. The motorcycle should placed on a lift, stand or jack and secured with straps or other locking devices, to keep the bike stable while the rear wheel is removed. Disconnect the battery before beginning disassembly. Remove the seat, rear fender, rear exhaust pipe, rear shocks, wheel /tire and swing arm as outlined in your service manual.
 2. Remove the front pulley cover and pulley [remember the pulley nut is left-handed], and install the new offset pulley according to instructions in your service manual.
 3. Remove the bearings from your old swing arm and install them in your new Fat Tire swing arm.

Again, refer to your service manual and install the new swing arm.

4. With the axel provided in your kit, attach the rear wheel with brake rotor and pulley attached to the swing arm. Use a straight edge or laser line to line up the front and rear pulley. Then, measure the distances between the wheel hub and the swing arm on either side to determine the length of spacers needed, [helpful hint: pvc pipe be used for trial purposes. Once alignment is achieved, pull the pvc out and cut your steel or aluminum spacers to match.]
5. The slot on the rear brake caliper mounting bracket where it mounts to the swing arm must be machined to $2 \frac{1}{16}$ " total width, using the axel hole as center line, to fit the larger swing arm. If you don't have a machine shop close by, ship us your bracket and we'll machine it for you, free of charge.

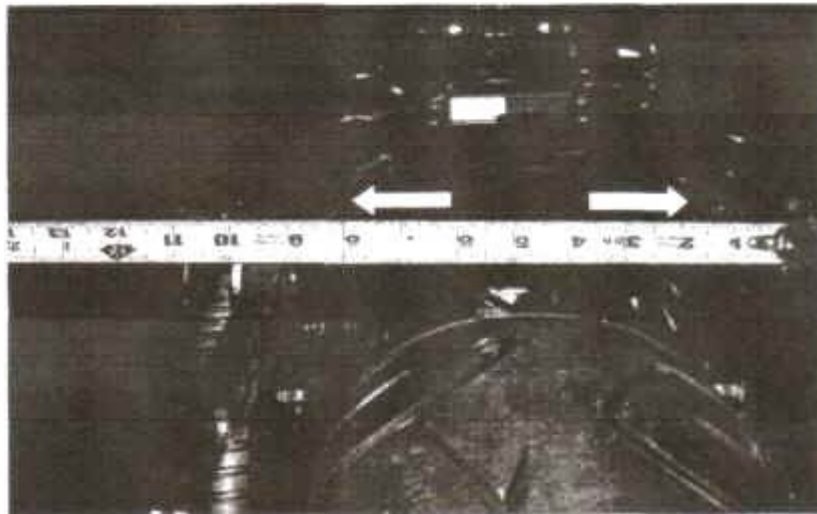


Photo 1

6. To mount the fender, the areas shown in photo 1. must be ground down on either side to achieve a minimum $8 \frac{3}{4}$ " [or more] clearance between the two frame rails where the upper shock mounts are seen [arrows]. Be careful not to get into the oil tank while grinding.
7. The rear fender rails must then be spread apart and/or the inside of the fender rails must also be ground down to achieve a minimum $8 \frac{3}{4}$ " clearance between the two rails. A hydraulic jack or "port-a-power" will do the job. As a precaution, a piece of all-thread can be inserted in one of the frame rail holes, with a nut and washer on each side and set to stop the rails from bending too far or getting out of square. Take your time and test fit the fender frequently while you work.
8. Set your fender between the rails to determine how much will need to be taken off the front in order to achieve the desired clearance between the fender and tire [stock fender clearance is $3\text{--}3\frac{3}{4}$ "]. You can check this by drilling a small hole in the fender under the seat area and stick a piece of stiff wire through the fender until it touches the top of the tire]. In order to achieve the desired profile, and allow clearance in the front for the oil tank, the front portion of the fender may have to be trimmed similar to what is shown in photo 2. Test your work frequently until clearance is achieved.

9. Mark and drill your mounting holes for the fender and for the turn signal wiring. Check fit and alignment again with mounting bolts in place and tightened. Mount your seat using the front mounting stud and mark the location for the rear mount
10. If you want to use the plastic front splash guard [skirt] from the stock fender, drill out the rivets and remove the skirt. Then use the skirt as a pattern to drill holes in the new fender. The skirt can be re-attached after it's painted.
11. Cut the hole for your tail light and mount it. When using the stock tail light assembly, the main supply connector will have to be cut off and the wires run through the steel wire loom on the underside of the new fender. Then use solder joints and cover them with heat shrink to re-attach the connector. This can be done before or after the fender is painted.
12. Make sure your mounting bolts clear the rear tire when the shocks are fully compressed.
13. Remove the fender and swing arm and it's ready to paint!

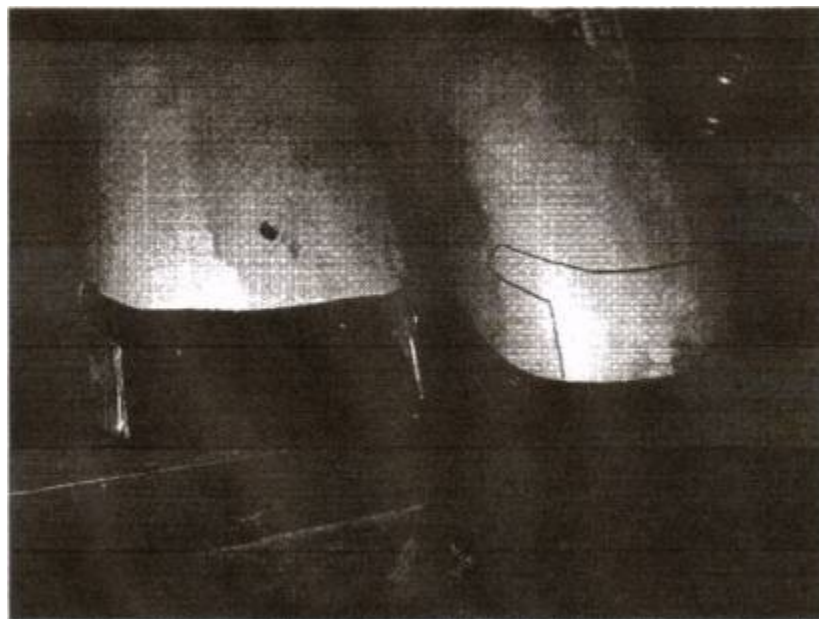


Photo 2

14. When the paint dries, mount your new painted swing arm, fender, tail light, and license plate bracket, just like you did the first time.
15. Mount shocks using spacers provided in the kit, to maintain proper shock alignment
16. Mount rear wheel and tire using axel and nut supplied with the kit Adjust belt tension and alignment as per Service Manual instructions.
17. Mount the front pulley cover with the bolts and spacers included in the kit.
18. Re-connect battery and battery cover.

