

LSR Pipe Installation

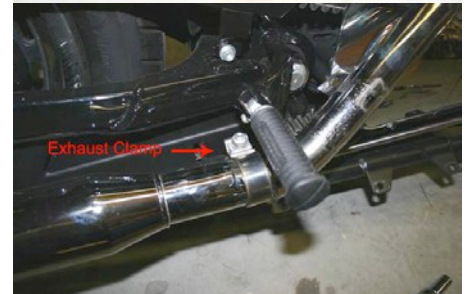
Removal of the Stock Exhaust

Tools needed: Flathead Screwdriver 1/2" Socket
 9/16" Deep Socket 1/4" Drive Deep 1/2" Socket
 10" 1/4" Drive Extension T-30 Torx bit
 5/16" Allen 3/16" Allen

1. Remove heat shields from head pipes by unscrewing the worm clamps with the **Flathead Screwdriver**. There are three on the front pipe and two on the rear. You must completely unscrew them to remove the heat shields.



2. Remove the mufflers. There are two 1/2" bolts securing the muffler to the support/crossover bracket located on the bottom of each muffler that must be removed using the **1/2" Socket**. Loosen the clamp securing the muffler to the head pipe using the **9/16" Deep Socket**. If you have passenger pegs, the rear clamp may be difficult to access but it is possible without removing them. Also remove the support bracket on the rear headpipe using the **9/16" Deep Socket**. Once everything is loose, the muffler is ready for removal. You may need to spray a penetrating lube between the muffler and headpipe to facilitate it's removal.



3. Remove the headpipes. Unbolt the flanges using the **1/4" Drive 1/2" Deep Socket** and the **10" 1/4" Drive Extension**.



4. Remove the old gaskets from the cylinder head.



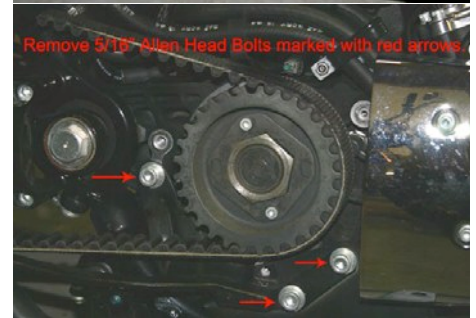
5. **Unbolt the rear brake rod using the T-30 Torx Bit** so you can remove the exhaust support/crossover pipe.



6. **Remove the front sprocket cover using 5/16" Allen Driver and 3/16" Allen Driver.** Use caution with the 3/16" Allen bolts, as they are installed with locktite from the factory, are very long, and may break if twisted too hard. Retain the rear exhaust support bracket under the 5/16" Allen.



7. **Remove the Exhaust crossover/support bracket using the 5/16" Allen Driver** on the three allen bolts, then slip the bracket over the rear brake rod.



Congratulations, you should now have a pile of parts that looks like this:



Installation of the LSR 2-1 Exhaust

Tools needed: 1/2" Box Wrench
10" 1/4" Drive Extension
5/16" Allen Driver
(For retaining rings) Piston Ring Spreader
Ft-Lbs Torque Wrench
9/16" Box Wrench

1/4" Drive Deep 3/8" Socket
3/8" Stubby Box Wrench
3/16" Allen Driver
Blue Locktite (REQUIRED!)
In-Lbs Torque Wrench

Anti-Seize
T-30 Torx Bit

1. Re-install 3 5/16" Allen Head bolts from Exhaust support/crossover. Use blue locktite. Torque to 30 ft-lbs.



2. Replace front sprocket cover. Longer 3/16" Allen Head Bolt goes in top right hole. Lower 3/16" Allen Head Bolt will require approximately 1/8" stack of 1/4" washers to take up the space from the missing exhaust crossover tube between the cover and the engine case. Install original support bracket and RB Racing support bracket under 5/16" Allen Head Bolt.



Use blue locktite on all bolts. Torque 5/16" Allen Head bolts to 30 Ft-Lbs, and the 3/16" Allen Head Bolts to 80-100 In-Lbs.

3. Re-Install rear brake rod bolt using T-30 Torx bit. Use blue locktite. Torque to 120 In-Lbs.



4. Install flange and retaining ring on head pipes. Make sure the shiny side of the flange will face out, and that the retaining ring is seated all the way in the groove. I used a piston ring expander to get the retaining rings onto the head pipes without scratching them up. Remember: Flange first, then retaining ring. The flange has a recession that the ring will fit into. Make sure it is seated all the way down.



5. Remove the O₂ sensor bung plug using the 5/16" Allen driver. Anti-seize the threads, then re-install.



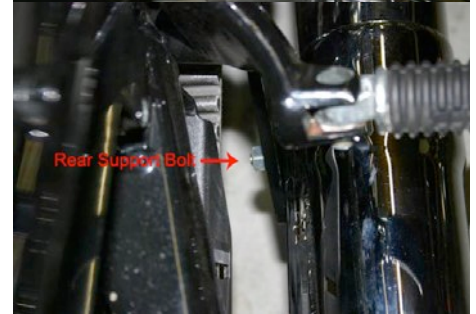
6. Install billet gaskets into the head pipes.



7. Hang rear pipe loosely. Install the new flange nuts onto the studs just enough to keep the flange and gasket in place. Slip front pipe into exhaust port (No nuts yet) then into the socket on the rear exhaust pipe by swinging the rear pipe towards the back of the bike. This part takes patience and possibly several attempts. Once both pipes are in place, install flange nuts onto the front exhaust studs loosely, then install the rear support bolt finger tight. Visually insure that the retaining rings are still seated in the groove on the flanges, and that the gaskets are in place. Evenly tighten the flange nuts to 100-120 In-Lbs using the 1/4" Drive Deep 3/8" Socket with the 10" 1/4" Drive Extension. Alternate tightening of the nuts to draw the flange down evenly. Tighten the rear pipe first, then the front. The front lower exhaust nut will require the use of the 3/8" Stubby Box Wrench to tighten due to limited access.



8. Finally, tighten the rear bracket bolt using the 1/2" Box Wrench.



Insure that the new exhaust does not rest against any wiring, hoses, etc. I had to re-route my breather hose because it was resting on the pipes due to the new pipe routing.

Wipe all fingerprints, grease, etc. off the pipes before you start the bike, or you could end up with permanent stains.

Congratulations, you've finally finished!



