Polishing the Final Drive

(Brake Drum Cover or any other Aluminum Parts)
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By no means am I the expert in polishing parts, I know others have done the fork tubes and handle bar control boxes, but I think I am the only one crazy enough to take on the final drive, and live to tell about it.
A word of warning, this process takes a long time, I am guessing combined I spent 8 hour working on the sanding and polishing

What you will need, aircraft paint remover, Dremel with 120 grit sanding wheels, steel wool, lots of sandpaper 220, 400, 600,800, 1000, Mineral Spirits, Mother's Mag and Aluminum polish, and a Dremel Polishing Kit.

1. Remove the drive as you would to grease the splines. That process is detailed in another how to on this site. http://650ccnd.com/shaft2.htm In order to remove the shaft from the cone portion of the drive you have to remove the coupler and rubber boot that is on the shaft. The rubber boot is held on by a snap ring, which is around the shaft just below the splines. Push the boot back to expose the snap ring. Remove the snap ring and the boot will come off and the shaft will slip out of the cone piece.

2. Mask off the black rubber end of the cone piece, which seals up the shaft coming out of the final drive. Also mask/protect the Crown/drive gear and splined input gear area.

3. Spray both parts of the hub with the paint stripper. Follow the directions on the can. This is mean stuff! Be careful! It will take about 10 minutes to work. Use some steel wool and wipe/scrub the paint off the parts.

You may have to hit it again with the spray to get all the paint off.

4. Once the paint is gone, look at the drive and cone piece, if it is like my 98 Classic it will have a lot of rough spots, and imperfections in the casting. Use the Dremel on low speed with the 120 sanding drums to smooth out the imperfections.

Keeping in mind every "scratch" you put in the metal will have to be sanded/polished out. I had a number of spots the needed work. It may take a couple drum changes to get the spots smoothed out. Once the high spots are knock down use less pressure with the Dremel and the 120 to smooth over the spots you just worked.

5. When you are happy with the rough appearance of the metal use 220 wet sand paper, and wet sand the parts. On the flat areas you can use a sanding block, but for most you will have to use your hand. You will be getting a lot of black residue, if it s a mess, you are doing it correctly. Remove any marks left by the drum sander, and other imperfections in the casting. I had a lot of areas the looked spotty, which were actually small dimples in the metal. Sand in only one direction when possible.

This will help the final shine. After you think you have it pretty good, clean it with water, or mineral spirits. Look closely to see if all the sand marks are going in the direction you had just been sanding, if not wet sand some more with the 220. Clean and inspect before changing to a high grit.

6. Now repeat step 5 using the 400 grit sand paper, but go the opposite direction. This will help you see that you have all 220 grit marks out. Keep moving up 600, 800, 1000 grit, changing direction with each change of paper grit, until you have it smooth. It will be dull, but all noticeable imperfections and sanding marks should be gone. I did not spend a lot of time on the bottom during this step since you can't see it anyway.
7. Use the Dremel with one of the SMALL felt wheels, and the Red Polish that came in the kit.

Wipe on some of the red compound with a cloth in a small area and work it in with the Dremel, on low speed. The red compound will turn black, and you will go through a number of the small felt wheels. Repeat this step a couple of times. You will not get all of the compound off with the wheel, so use a rag to work it as well. You should have a pretty good shine at this point.

8. To get a Great Shine use the Mother's Mag and Aluminum Polish as you did in step 7 with the compound.

Once again you will have to use several of the small felt wheels. By this time you should be able to see your reflection!

Put it back together by following the process to grease and reinstall the final drive as noted above.

The process is the essentially the same for the rear brake drum cover, and the other aluminum parts on the bike. If a magnet does not stick, most likely you have Aluminum, so get to polishing. The other parts will not start out as rough, so you can begin with the 600 sand paper and move up from there, and finishing with the Mother's polish.