

Iron Sportster pushrod tubes R&R

Tips and tricks for adjusting the valves and removing and replacing the pushrod tubes.

The tips and tricks:

1. **Clean everything with engine cleaner, hose off, and blow off with air.**
2. **The long tubes are not reversible, look closely.**
3. **Be sure to reuse the thin flat washer that goes between the middle cork and the spring.**
4. **Leave the jam nuts snug and just turn the 1/2" lifter.**
5. **Pop stubborn rods in with needle-nose pliers.**
6. **Make sure the corks are the small enough to fit the middle cup.**
7. **Have a bin or tray for all the parts.**
8. **As always, return the tools to the toolbox as you work.**
9. **Clean clean clean.**

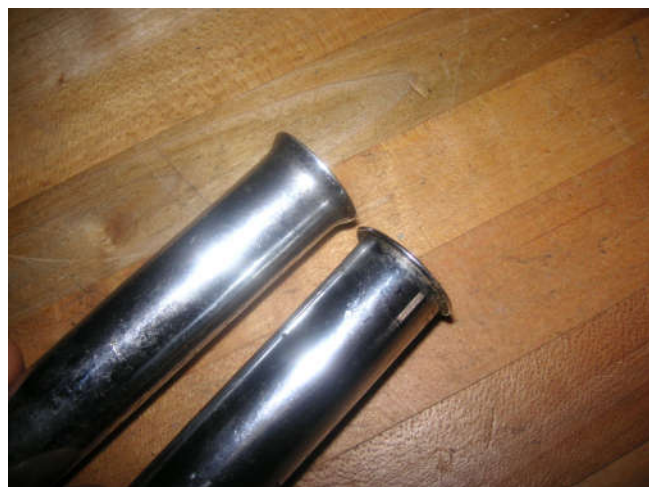


As simple as the pushrods look, there are many little subtle things you have to know about. (Click for video.)

4. **Leave the jam nuts snug and just turn the 1/2" lifter.** Iron Sportsters have iron cylinder heads. This means the valve seats onto cast iron instead of a hardened steel seat. As the engine runs, the valve action wears down the seats, especially on the exhaust valves. This means you have to adjust the lifters frequent, as often as every 500 miles.
6. **Make sure the corks are the small enough to fit the middle cup.** It is not a difficult procedure, you can do it in 5 minutes. Thing is, there are some tricks that can save you money and time. I used to have to buy a new set of aluminum lifter blocks every couple years. That was because I was not cleaning the whole side of the motor before I opened up the pushrod tubes to adjust the valves.
9. **Clean clean clean.** A Sifton tappet set is 150 bucks, and you get converted to cap-head Allen bolts. A true V-Twin replacement is \$135 and you can keep the 1/2 inch hex-heads so that you don't have to try three different Allen wrenches to get the right size.

To do clean things right, spray the side of the engine with engine degreaser, let it soak, and then hose it off. Then take your air gun and blow any remaining grit out of the area. In a pinch, you can just blow off the lifter bases and around the pushrods.

Since doing this, I have not had to buy another set of lifter blocks in 20 years. In general you should think of working on your bike like being a doctor operating on an old man. Don't be sanding and bead-blasting and sweeping the floor right before you open up the patient.



If you remove the tubes, perhaps to polish the chrome or replace all the corks, you have to note that the lower chrome tubes are not reversible. There is a cone shape that points up, and a flat area that points down against the lifter block.

Another common mistake is throwing away the thin steel washer that goes against the middle cork in the spring-loaded cup of the pushrod tubes. The cork gets black and you don't notice the black washer, and then the when you re-assemble the spring pushing against the cork, instead of having that thin thrust washer to bear on.



You need to rotate the motor with the kickstarter to get the pushrods down all the way. If you have a 1980-84 Iron Sportster without a kickstarter, that means you need to bump the starter, or put the bike in 4th gear and roll it forward and back to rotate the engine.

Even getting the lifter all the way down does not always make it easy to get the pushrod out. After running the jam nut up and the adjustable cup down, you might have to use needle-nose pliers to pop out the pushrod. Never pry on the pushrod itself, it will bend and you will have ruined it.



Make sure the corks you buy are small enough to easily fit in the middle cups.