



Installation Instructions for high flow secondary throttle shaft kit

Installation of the high flow secondary throttle shaft is fairly straight forward, however there are a few precautions that are noted below.

1. Remove the throttle body from the main body.
2. Remove the secondary safety link from the primary throttle lever.
3. Remove the staking from the throttle plate screws with a file until there is only a very small amount of thread protruding above the throttle shaft.
4. With a Phillips head screw driver, remove the throttle plate screws.
5. Remove the throttle plates, note the position of the stamped number in the plate so it can be positioned the same way during reassembly
6. Remove the original throttle shaft. **NOTE:** As you remove the shaft there will be plastic bushings attached to the shaft. Usually there are a total of four bushings, three wide and one thin.
7. In the package there will be three replacement bearings. These bearings need to be installed with the new throttle shaft. Prior to installation, it is necessary to "pre-form" the bearings. Take the bearing and roll it tightly over a round screwdriver shaft. This will allow these bearings to assume a rounded shape.
8. Examine the new throttle shaft. You will note there are three distinct grooves cut into the shaft that $\frac{1}{4}$ " wide. Two grooves are located on the side opposite the throttle lever and one on the throttle lever side of the shaft. These grooves are where the plastic bushings will be positioned.
9. Install the new throttle shaft through all three pilot holes of the throttle body. Continue to push the throttle shaft into the throttle body until the inside groove of the long side of the throttle shaft (side furthest away from the throttle lever). Take one of the plastic bearings, wrap it around the throttle shaft in the cut groove. Turn and push in the throttle shaft until the bearing enters into the throttle body shaft pilot hole.
10. As you push in the shaft, you will note on the throttle body pilot hole closest to the throttle lever, another groove is about to enter the throttle body. Place the second plastic bearing in this groove, turn and push the shaft until this second bearing enters into the throttle body. It may be necessary to compress the two bearings to reduce the tension as you push the shaft into the throttle body.
11. Once these two bearings are inside the throttle body, continue to push the throttle shaft until the opposite end of the shaft sticks out beyond the throttle body to the point where it exposes the third groove. Position the plastic bearing in this groove, then turn and pull the shaft back into the throttle body. You are now ready to install the throttle plates.
12. Place the plates in their original position (**NOTE:** the stamped numbers face down (intake manifold side of the carburetor) and positioned toward the center.
13. Place a drop of thread lock liquid on each throttle plate screw prior to installation. Using a #15 Torx Head screwdriver, tighten each screw until it makes contact with the throttle plate, then back them off $\frac{1}{4}$ turn.
14. Manually open and close the throttle shaft to help center the throttle plates in the bore. Do not open the shaft too far as this may cause the plates to shift to a point where the plates will not close completely. Once the plates are in position, lightly tap the leading edge of the plate (toward the rear of the throttle body) with a small plastic screwdriver handle to help seat them in the bore.
15. Move the throttle shaft in and out of the throttle body. Try to position the shaft so it is in the center of this travel. This will keep the plates positioned correctly once assembled. Before tightening the throttle plate screws, check the end of the shaft opposite the throttle lever to verify there is enough of the shaft sticking out beyond the throttle body casting to attach the vacuum secondary operating lever. If all of the index flat is exposed, tighten the throttle plate screws progressively so as to not to distort the plate.
16. Open and close the throttle shaft to check for smooth operation. You can now reinstall the throttle body on the main body, install the secondary safety link, then reconnect the appropriate linkage pieces.
17. Check throttle operation again with the carburetor completely assembled to make certain the throttle shafts go wide open and return to the closed position using only the primary throttle shaft spring.