

# INSTRUCTIONS

910-11591

## THROTTLE SHAFT

**CAUTION:** THIS IS A .005" OVERSIZED THROTTLE SHAFT DESIGNED TO REPAIR CARBS WITH WORN BASE PLATES. THE THROTTLE SHAFT CAN NOT BE INSTALLED WITHOUT PERFORMING THE FOLLOWING MODIFICATIONS.

- 1) Remove carb from manifold and disassemble carb as required to remove the base plate assembly. Remove any linkage attached to the throttle shaft.

**NOTE:** If you will be re-using the original butterflies, mark their position so they can be re-installed in their proper orientation.



- 2) Hold the throttle blades at wide open throttle. Using a small mill file, remove the exposed threads of the butterfly screws. File down until flush with the throttle shaft. Be careful that you do not nick or gouge the throttle bores in the base plate. Remove butterfly screws and discard. Remove throttle blades and slide old throttle shaft out of base plate.
- 3) Remove the accelerator pump arm / throttle stop from original throttle shaft. The arm is pressed onto the throttle shaft and the end of the throttle shaft is peened over to retain it. Grind or file off the excess metal which retains the arm on the shaft. Remove arm and place to the side for re-installation later.

**WARNING:** Use extreme caution when drilling out base plate. Both sides of base plate must remain in proper axial alignment or base plate could be ruined.

- 4) The throttle shaft bore in the baseplate must be drilled or reamed out to an inside diameter of .282"-.285". Use a 9/32 drill bit or a .285" diameter reamer. The benefit of using a reamer is that the non-fluted shank of the reamer can be passed through both sides of the carb base to maintain proper alignment. If using a drill bit, drill all the way through both sides of the carb base, not through each side separately. After drilling / reaming, de-burr the base plate and check throttle shaft fit. If throttle shaft does not rotate freely use a piece of 600 grit sandpaper wrapped around a 1/4" rod to lightly hone the bore for proper fit.
- 5) Clean baseplate assembly in solvent and blow dry to remove any metal chips.

- 6) Using a cotton swab dipped in oil, lightly lubricate the throttle shaft bore in baseplate and insert throttle shaft. Install butterflies in their previously marked location and install screws, but do not tighten. Head of screws should be up. Rotate throttle shaft toward the idle stop, maintain light pressure in this position. Gently manipulate throttle blades so that they are properly seated in the throttle bores as you tighten the screws. After all 4 screws are tight, check throttle shaft for sticking or binding. Reposition throttle blades if necessary to obtain freedom of rotation.
- 7) Re-install accelerator pump linkage arm. Position arm so that the wide open throttle stop contacts the base plate when the throttle plates are 90 degrees to the base plate. Install the retaining screw in the end of throttle shaft to retain the pump linkage arm.

**CAUTION:** Double check everything prior to the next step. Once butterfly screws have been staked, they can **NOT** be removed without potential damage to the shaft. **DO NOT** strike throttle shaft if it is not supported on the back side. Throttle shaft could be bent or damaged beyond repair.

- 8) Place a deep socket (or a suitable drift of similar size) into one of the throttle bores so that it rests on the screw head side of the throttle shaft. Turn the baseplate upside down and rest the socket (or drift) on benchtop, supporting the throttle shaft from underneath. Note that the threaded end of the butterfly screws are recessed. Use a blunt nosed center punch aligned with the recess in the screw. Gently strike punch with a hammer to slightly mushroom the screw so that it can not vibrate loose and cause engine damage. Repeat for all four (4) butterfly screws using caution to support throttle shaft properly.
- 9) Reassemble carb and install on engine.

# IMPORTANT

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